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ABSTRACT

Curriculum rules for the state of Texas, grades K-12, were mandated by the 67th Texas legislature (legal reference: Texas Education Code Par. 21.101; 19 Texas Administrative Code 75 (Curriculum)). The rules are organized under seven headings: (A) general provisions; (B) essential elements, grades K-6; (C) essential elements and list of approved courses, grades 7-8; (D) essential elements and list of approved courses, grades 9-12; (E) well-balanced curriculum; (F) graduation requirements; and (G) other provisions. (MD)

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STATE BOARD OF EDUCATION RULES FOR CURRICULUM

PRINCIPLES, STANDARDS, AND PROCEDURES FOR ACCREDITATION OF SCHOOL DISTRICTS

EA 016 944

STATE BOARD OF EDUCATION RULES FOR CURRICULUM

PRINCIPLES, STANDARDS, AND PROCEDURES FOR ACCREDITATION OF SCHOOL DISTRICTS

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TEXAS EDUCATION AGENCY
201 East 11th Street
Austin, Texas 78701

FOREWORD

This edition of the *State Board of Education Rules for Curriculum* outlines the rules and procedures for the implementation of the state basic curriculum that was mandated by the 67th Texas Legislature in Section 21.101 of the *Texas Education Code*. To be accredited, school districts shall implement the provisions of these rules in "a manner which will enable all students to participate actively in a well-balanced curriculum and master, to the best of their ability, the knowledges, skills, and competencies established through the essential elements."

Raymon L. Bynum

Raymon L. Bynum
Commissioner of Education

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19 TAC CHAPTER 75 CURRICULUM

SUBCHAPTER A. GENERAL PROVISIONS

Statutory Citation

Texas Education Code §28.002:

"(a) Each school district that offers kindergarten through grade 12 shall offer a well-balanced curriculum that includes:

(1) English language arts;
(2) other languages, to the extent possible;
(3) mathematics;
(4) science;
(5) health;
(6) physical education;
(7) fine arts;
(8) social studies;
(9) economics, with emphasis on the free enterprise system and its benefits;
(10) business education;
(11) vocational education; and
(12) Texas and United States history as individual subjects and in reading courses.

"(b) The State Board of Education by rule shall designate subjects comprising a well-balanced curriculum to be offered by a school district that does not offer kindergarten through grade 12.

"(c) The State Board of Education by rule shall designate the essential elements of each subject listed in Subsection (a) of this section and shall require each district to provide instruction in those elements at appropriate grade levels. In order to be accredited, a district must provide instruction in those essential elements as specified by the state board.

"(d) Local instructional plans may draw upon state curriculum frameworks and program standards as appropriate. The responsibility for enabling all children to participate actively in a balanced curriculum which is designed to meet individual needs rests with the local school district. Districts are encouraged to exceed minimum requirements of the law. A primary purpose of the public school curriculum in Texas shall be to prepare thoughtful, active citizens who understand the importance of patriotism and can function productively in a free enterprise society with appreciation for the basic democratic values of our state and national heritage.

"(e) The State Board of Education shall provide for optional subjects in addition to those provided by Subsection (a) of this secton as appropriate for districts that require choices in order to address unique local needs. In addition, the commissioner of education may permit a school district to vary from the required curriculum as necessary to avoid hardship to the district.

"(f) Not later than the 30th day preceding the day on which each regular session of the legislature convenes, the State Board of Education shall transmit to the governor, the lieutenant governor, and the legislature a report on the status of curriculum in the public schools. The report shall include recommendations for legislative changes necessary to improve, modify, or add to the curriculum.

"(g) The State Board of Education and local school districts shall foster the continuation of the tradition of teaching American and Texas history and the free enterprise system in regular subject matter and in reading courses in the public free schools of Texas and in the adoption of textbooks."

Rules §75.1 *Philosophy of the State Board of Education Relating to the Curriculum.*

(a) Public elementary and secondary education is responsible for providing each student with the development of personal knowledge, skill, and competence to maximum capacity. The fulfillment of this responsibility by the state and its school districts is fundamental to enabling citizens to lead productive and effective lives and is further in the interest of the state and the nation.

(b) The curriculum reflects the public expectation of those specific knowledges, skills, and competencies that schools shall teach and students should learn. The State Board of Education represents the public and is responsible for establishing a well-balanced curriculum that shall be offered by all Texas school districts.

(c) The curriculum shall reflect what all students should learn to be self-supporting, self-governing, and contributing members of society. All students—regardless of place of residence, academic ability, or other condition—shall have the opportunity to be instructed in the well-balanced curriculum and to benefit from such instruction.

(d) A primary purpose of the curriculum shall be to prepare thoughtful, active citizens who understand the importance of patriotism and can function productively in a free enterprise society with appreciation of the basic democratic values of our state and national heritage.

(e) The public school curriculum shall be designed to promote and provide for the issuance of credit in subjects or courses based on student achievement levels rather than time on task.

§75.2 *General Responsibility of School Districts.*

(a) Each school district shall be responsible for providing a well-balanced curriculum and for delivering effective instruction to all students enrolled. School districts shall implement the provisions of this chapter in a manner which will enable all students to participate actively in a well-balanced curriculum and master to the best of their abilities, the knowledge, skills, and competencies established through the essential elements. For students with special needs, school districts shall provide modifications in methodologies, pacing, and materials to ensure that instruction is delivered, as appropriate, in the essential elements.

(b) School district boards of trustees shall adopt policies which give direction for the total instructional program. Where provisions of this chapter have made available options for school districts, policies shall include the choices made by the board of trustees in the exercise of those options. School district boards should make such choices based upon identified student needs. School districts shall be encouraged to exceed minimum requirements established by law and the State Board of Education.

(c) School district boards of trustees shall establish policy which delineates a procedure for evaluation of the effectiveness of the instructional program. The procedure shall include collection of data regarding student progress in the essential elements and other pertinent information. The school district board shall annually review that information and identify areas for needed improvement. Based upon the findings of the review, the school district shall make necessary adjustments in the instructional program.

(d) School district boards of trustees shall adopt policies to provide and ensure adequate planning and preparation time, to be uninterrupted by any other activities, in order for teachers to prepare adequately for effective instruction of the curriculum to all students. School district boards of trustees shall also adopt policies designed to prevent distractions from, interruptions, and loss of scheduled class time by any activity during the school day.

(e) It shall be the responsibility of the school boards of trustees to adopt policies which will require and permit school counselors, deans, principals, assistant principals, teachers, and other student advisors for grades 7-12 to become thoroughly familiar with the curriculum, course offerings, graduation requirements, and the differences between the high school graduation requirements in §75.151 of this title (relating to High School Graduation Requirements) and the advanced high school program in §75.152 of this title (relating to Advanced High School Program) so that they may adequately consult with, advise, and counsel students and their parents or guardians as to the appropriate courses and subjects available for individual students. Similarly, boards of trustees shall adopt such policies as may be necessary to adequately disseminate and inform parents and guardians of students, as well as the students themselves, of the curriculum for grades 7-12, the course offerings, graduation requirements, and the differences between the high school graduation requirements in §75.151 of this title (relating to High School Graduation Requirements) and the advanced high school program in §75.152 of this title (relating to Advanced High School Program). Every effort should be made to relieve counselors of extraneous tasks so that they may appropriately meet their responsibilities to consult and counsel with students as to their individual educational needs, goals, and aims.

(f) Consistent with the provisions of the compulsory attendance law, and in order for students to receive the maximum benefits of the curriculum, it shall be the responsibility of the school boards of trustees to adopt policies which will impose limits on students' absences and require make-up or remedial work from the students with excessive absences.

§75.3 *Essential Elements (Kindergarten-Grade 12) Mandated.*

Each school district shall provide instruction in the essential elements of the appropriate grade levels as specified in Subchapter B of this chapter (relating to Essential Elements—Kindergarten-Grade Six), Subchapter C of this chapter (relating to Essential Elements—Grades Seven-Eight), Subchapter D of this chapter (relating to Essential Elements—Grades Nine-12), and Subchapter E of this chapter (relating to Well-Balanced Curriculum). A school district may add elements at its discretion but shall not delete or omit instruction in the essential elements required by the State Board of Education. Instruction in the essential elements may be modified for students with special needs, as appropriate, under the provisions of §75.4 of this title (relating to Special Populations and Programs).

§75.4 *Special Populations and Programs.*

(a) All students, regardless of special need or condition, shall be provided a well-balanced curriculum pursuant to the provisions of this chapter. The essential elements represent those core knowledges, skills, and competencies all students should learn to be effective and productive members of society. Students with special needs shall be instructed in those same essential elements in a manner appropriate to their needs. Where a handicapping condition identified pursuant to subsection (b)(4) of this section renders the elements inappropriate for the particular student, instruction shall be especially designed based on the student's abilities.

(b) School district programs for students identified as having special needs shall modify the method of instruction, pacing, or materials, as appropriate, to provide full opportunity for learning the essential

elements. Students with special needs shall receive instruction in accordance with this chapter and pursuant to applicable federal and state law and rules of the State Board of Education including:

(1) bilingual education and other special language programs—Chapter 77, Subchapter R of this title (relating to Bilingual Education and Other Special Language Programs);

(2) gifted and talented—Chapter 89, Subchapter C of this title (relating to Educational Programs for Gifted and Talented Students);

(A) School districts may modify the delivery of instruction for gifted and talented students by accelerating, providing greater depth, and expanding the essential elements described in this chapter.

(B) The school district shall ensure that students are instructed in all essential elements and demonstrate an acceptable degree of mastery while participating in such programs.

(3) compensatory education—Chapter 89, Subchapter F of this title (relating to Compensatory Education);

(4) special education—Chapter 89, Subchapter G of this title (relating to Special Education); and

(5) migrant education programs—Chapter 89, Subchapter J of this title (relating to Migrant Education Programs).

(c) Programs for special population students may utilize specialized personnel to assist in the delivery of instruction. Such personnel and regular program instructional personnel shall be jointly responsible for the cooperative delivery of effective instruction in essential elements, as appropriate.

(d) School districts shall ensure that programs for special populations are coordinated with and are an integral part of the total instructional program. The basis for such district and campus level coordination shall be the provision of effective instruction in the essential elements in this chapter.

§75.5 *State Board of Education Review and Renewal.*

(a) During the school year 1990-91 and every five years thereafter, the State Board of Education shall review and evaluate the appropriateness of the identified essential elements and other provisions of this chapter. Based upon the results of the five-year assessments, the State Board of Education shall modify the rules as may be appropriate.

(1) The commissioner of education shall secure and submit, for State Board of Education study, evaluative information regarding the continued appropriateness of the essential elements and their grade level designations. The commissioner shall also collect and provide the best available data regarding continuous student progress in the essential elements.

(2) The commissioner of education shall secure and submit to the board data regarding the continued appropriateness of other provisions of this chapter, particularly Subchapter E of this chapter (relating to Well-Balanced Curriculum).

(b) In accordance with law, the State Board of Education shall report on the status of the curriculum in the public schools to the governor, lieutenant governor, and legislature on the 30th day preceding each regular legislative session. The report shall include recommendations for legislative changes, as necessary, to improve, modify, or add to the curriculum.

(c) In order to fulfill the requirements of this section, school districts shall provide information that may be requested by the commissioner of education.

CHAPTER 75. CURRICULUM

SUBCHAPTER B. ESSENTIAL ELEMENTS—KINDERGARTEN-GRADE SIX

§75.21 *English Language Arts.*

(a) English language arts, kindergarten. English language arts, kindergarten, shall include the following essential elements:

(1) Listening. Developing skill in attending to, responding to, and analyzing oral communications. The student shall be provided opportunities to:

(A) focus attention on a speaker without interrupting;

(B) listen to appreciate sound devices of rhythm, rhyme, alliteration, and onomatopoeia;

(C) listen carefully to instructions and important information; and

(D) respond to storytelling by drawing or painting.

(2) Speaking.

(A) Developing fluency in using oral language to communicate effectively. The student shall be provided opportunities to:

(i) engage in creative dramatic activities and nonverbal communication;

(ii) use a variety of words to express feelings and ideas;

(iii) speak clearly and at an appropriate rate; and

(iv) communicate effectively in one-to-one and small group situations.

(B) Speaking to accomplish a variety of purposes: informing, expressing, persuading, entertaining. The student shall be provided opportunities to:

(i) relate events from personal experience; and

(ii) present poems chorally.

(3) Reading.

(A) Using word attack skills to decode written language. The student shall be provided opportunities to:

(i) discriminate sound for each letter of the alphabet;

(ii) discriminate visual shapes, forms, and letters; and

(iii) understand the direction of conventional print.

(B) Developing vocabulary to understand written material. The student shall be provided opportunities to:

(i) relate experiences with appropriate vocabulary in complete sentences; and

(ii) supply missing words in oral context.

(C) Using comprehension skills to gain meaning from whatever is read. The student shall be provided opportunities to respond to storytelling or oral reading by:

(i) telling what the story is about;

(ii) recalling important facts and details;

(iii) arranging the events in sequential order;

(iv) distinguishing between real and make-believe; and

(v) retelling a story.

(D) Applying reading skills to a variety of practical situations. The student shall be provided opportunities to follow oral directions.

(E) Developing literary appreciation skills to provide personal enjoyment. The student shall be provided opportunities to:

(i) appreciate repetition, rhyme, rhythm, and alliteration;

(ii) respond to various forms of literature;

(iii) become acquainted with a variety of selections, characters, and themes of our literary heritage;

(iv) select books for individual needs and interests; and

(v) follow simple story line in stories read aloud.

(4) Writing.

(A) Using a variety of techniques to select topics and to generate material to write about those topics. The student shall be provided opportunities to recognize that everyone has experiences to write about.

(B) Developing skills in writing effectively for a variety of purposes, modes, and audiences. The student shall be provided opportunities to recognize that writing can entertain and inform.

(C) Applying the conventions of writing to produce effective communications. The student shall be provided opportunities to:

(i) recognize that conventions are used to help communicate to an audience;

(ii) recognize the nature of sound-symbol correspondence; and

(iii) recognize the conventions of writing—spaces between words, word order, and marks on pages other than letters of alphabet.

(5) Language. Developing skill in using the grammar of English for effective oral and written communication. The student shall be provided opportunities to use oral language in a variety of situations.

(b) English language arts, grade one. English language arts, grade one, shall include the following essential elements.

(1) Listening. Developing skill in attending to, responding to, and analyzing oral communications. The student shall be provided opportunities to:

(A) respond to nonverbal cues;

(B) listen to appreciate sound for each letter of the alphabet and devices of rhythm, rhyme, alliteration, and onomatopoeia;

(C) identify the main idea of a speaker's message; and

(D) respond to storytelling by drawing or painting.

(2) Speaking.

(A) Developing fluency in using oral language to communicate effectively. The student shall be provided opportunities to:

(i) engage in creative dramatic activities and nonverbal communication;

(ii) use a variety of words to express feelings and ideas;

(iii) speak clearly and at an appropriate rate; and

(iv) contribute ideas and information in group discussions.

(B) Speaking to accomplish a variety of purposes: informing, expressing, persuading, entertaining. The student shall be provided opportunities to:

(i) sequence events appropriately when relating them;

(ii) present poems chorally;

(iii) give a reason to persuade a peer or close adult; and

(iv) give a short sequence of directions for others to follow.

(3) Reading.

(A) Using word attack skills to decode written language. The student shall be provided opportunities to:

(i) use basic phonics: initial, medial, and final consonants, long and short vowels;

(ii) use simple structural analysis: compound words, inflectional endings;

(iii) acquire a basic sight vocabulary; and

(iv) use context clues.

(B) Developing vocabulary to understand written material. The student shall be provided opportunities to:

(i) relate experiences with appropriate vocabulary in complete sentences;

(ii) understand the meaning of words in context;

(iii) acquire reading vocabulary relating to concepts being learned; and

(iv) alphabetize according to initial letter.

(C) Using comprehension skills to gain meaning from whatever is read. The student shall be provided opportunities to:

(i) identify an explicitly stated main idea;

(ii) recall facts and details;

(iii) arrange events in sequential order;

(iv) distinguish between fantasy and fact;

(v) summarize a selection;

(vi) identify the cause of a given event; and

(vii) predict probable future outcomes.

(D) Applying reading skills to a variety of practical situations. The student shall be provided opportunities to:

(i) follow written directions;

(ii) use phrases in oral reading; and

(iii) use basic parts of a book: table of contents, title page.

(E) Developing literary appreciation skills to provide personal enjoyment. The student shall be provided opportunities to:

(i) appreciate repetition, rhyme, rhythm, and alliteration;

(ii) respond to various forms of literature;

(iii) become acquainted with a variety of selections, characters, and themes of our literary heritage;

(iv) select books for individual needs and interests;

(v) follow story line involving several characters;

(vi) describe the time and setting of a story; and

(vii) understand the feelings and emotions of characters.

(4) Writing.

(A) Using a variety of techniques to select topics and to generate material to write about those topics. The student shall be provided opportunities to:

(i) use information and ideas from personal experience as a source for writing; and

(ii) select topics of interest to self and others.

(B) Developing skills in writing effectively for a variety of purposes, modes, and audiences. The student shall be provided opportunities to:

(i) write stories and brief descriptions; and

(ii) recognize that the function of first-draft writing is to capture ideas.

(C) Applying the conventions of writing to produce effective communications. The student shall be provided opportunities to:

(i) recognize that rewriting and editing are done with a particular purpose and audience in mind;

(ii) learn basic phonetic spelling generalizations and exceptions;

(iii) use basic conventions of capitalization and punctuation; and

(iv) write legible manuscript letters.

(5) Language. Developing skill in using the grammar of English for effective oral and written communications. The student shall be provided opportunities to:

(A) use correct singular and plural forms of regular nouns; and

(B) use correct forms of regular verbs.

(c) English language arts, grade two. English language arts, grade two, shall provide the following essential elements:

(1) Listening. Developing skill in attending to, responding to, and analyzing oral communications. The student shall be provided opportunities to:

(A) adjust physical conditions to promote listening;

(B) listen to appreciate sound devices of rhythm, rhyme, alliteration, and onomatopoeia;

(C) identify the main idea of a speaker's message; and

(D) respond to a speaker by asking questions and contributing information.

(2) Speaking.

(A) Developing fluency in using oral language to communicate effectively. The student shall be provided opportunities to:

(i) engage in creative dramatic activities and nonverbal communication;

(ii) use a variety of words to express feelings and ideas;

(iii) speak clearly to a group; and

(iv) respond to thoughts expressed by others in group discussions through questioning and contributing related ideas.

(B) Speaking to accomplish a variety of purposes: informing, expressing, persuading, entertaining. The student shall be provided opportunities to:

(i) elaborate and use description when relating events orally;

(ii) present poems chorally;

(iii) give a reason to persuade a peer or close adult; and

(iv) give a short sequence of directions for others to follow.

(3) Reading.

(A) Using word attack skills to decode written language. The student shall be provided opportunities to:

(i) use complex phonics: inital blends, digraphs, and diphthongs;

(ii) use complex structural analysis: root words, common affixes, and contractions;

(iii) acquire basic sight vocabulary; and

(iv) use context clues.

(B) Developing vocabulary to understand written material. The student shall be provided opportunities to:

(i) relate experiences with appropriate vocabulary in complete sentences;

(ii) understand the meaning of words in context;

(iii) acquire a reading vocabulary relating to concepts being learned; and

(iv) alphabetize according to two or more letters.

(C) Using comprehension skills to gain meaning from whatever is read. The student shall be provided opportunities to:

(i) identify the main idea of several paragraphs;

(ii) recall important facts and details from a selection;

(iii) arrange events in sequential order;

(iv) distinguish between fantasy and fact;

(v) summarize a selection;

(vi) identify cause and effect relationships; and

(vii) predict probable future outcomes.

(D) Applying reading skills to a variety of practical situations. The student shall be provided opportunities to:

(i) follow written directions;

(ii) use cadence and stress in oral reading; and

(iii) use basic parts of a book: table of contents, title page.

(E) Developing literary appreciation skills to provide personal enjoyment. The student shall be provided opportunities to:

(i) appreciate repetition, rhyme, rhythm, and alliteration;

(ii) respond to various forms of literature;

(iii) become acquainted with a variety of selections, characters, and themes of our literary heritage;

(iv) select books for individual needs and interests;
(v) follow story line involving several characters;
(vi) describe the time and setting of a story; and
(vii) understand the feelings and emotions of characters.

(4) Writing.

(A) Using a variety of techniques to select topics and to generate material to write about those topics. The student shall be provided opportunities to:

(i) use a variety of prewriting activities as sources for later writing; and
(ii) stay on the topic.

(B) Developing skills in writing effectively for a variety of purposes, modes, and audiences. The student shall be provided opportunities to:

(i) add information omitted in a first draft to subsequent drafts; and
(ii) narrate events in chronological order.

(C) Applying the conventions of writing to produce effective communications. The student shall be provided opportunities to:

(i) participate in rewriting conferences;
(ii) analyze structural elements to spell words;
(iii) use basic conventions of capitalization and punctuation;
(iv) write legible manuscript letters; and
(v) write complete sentences.

(5) Language. Developing skill in using the grammar of English for effective oral and written communications. The student shall be provided opportunities to:

(A) use correct singular and plural forms of regular nouns; and
(B) use correct forms of common irregular verbs and the verb "to be."

(d) English language arts, grade three. English language arts, grade three, shall include the following essential elements:

(1) Listening. Developing skill in attending to, responding to, and analyzing oral communications. The student shall be provided opportunities to:

(A) adjust physical conditions to promote listening;
(B) listen to appreciate sound devices of rhythm, rhyme, alliteration, and onomatopoeia;
(C) recognize a speaker's purpose for a presentation;
(D) respond to a speaker by asking questions and contributing information; and
(E) distinguish between fact and opinion.

(2) Speaking.

(A) Developing fluency in using oral language to communicate effectively. The student shall be provided opportunities to:

(i) engage in creative dramatic activities and nonverbal communication;
(ii) use a variety of words to express feelings and ideas;
(iii) speak clearly to a group; and
(iv) use visual aids in making oral presentations.

(B) Speaking to accomplish a variety of purposes: informing, expressing, persuading, entertaining. The student shall be provided opportunities to:

(i) elaborate and use description when relating events orally;
(ii) use a brief set of reasons to persuade a peer or an adult;
(iii) give a longer set of directions for others to follow; and
(iv) read stories and poems with appropriate verbal and nonverbal communication.

(3) Reading.

(A) Using word attack skills to decode written language. The student shall be provided opportunities to:

(i) use more complex phonics including initial clusters, medial diphthongs, and digraphs;

(ii) use complex structural analysis to identify words with two or more prefixes and/or suffixes;

(iii) know basic sight vocabulary;

(iv) use context clues for word identification; and

(v) use the dictionary as a key to pronunciation including phonetic respelling and use code marks of orthography.

(B) Developing vocabulary to understand written material. The student shall be provided opportunities to:

(i) relate experiences with appropriate vocabulary in complete sentences;

(ii) understand the meaning of words in context;

(iii) acquire a reading vocabulary relating to concepts being learned; and

(iv) use the dictionary to determine the meaning of words.

(C) Using comprehension skills to gain meaning from whatever is read. The student shall be provided opportunities to:

(i) identify the main idea of a selection;

(ii) recall important facts and details that support the main idea;

(iii) arrange events in sequential order when signal words are not stated;

(iv) distinguish between fact and nonfact including opinion;

(v) summarize a selection;

(vi) understand the multiple causes of a given event;

(vii) predict probable future outcomes; and

(viii) draw conclusions.

(D) Applying reading skills to a variety of practical situations. The student shall be provided opportunities to:

(i) follow two- and three-step directions;

(ii) develop facility in oral reading for audience;

(iii) use parts of a book: index, glossary;

(iv) use the dictionary and the encyclopedia to locate information; and

(v) use graphic sources for information: simple maps, globes, pictures, diagrams, bar graphs.

(E) Developing literary appreciation skills to provide personal enjoyment. The student shall be provided opportunities to:

(i) differentiate between figurative and literal language;

(ii) respond to various forms of literature;

(iii) become acquainted with a variety of selections, characters, and themes of our literary heritage;

(iv) select books for individual needs and interests;

(v) follow plot in longer stories that are not chronological;

(vi) describe the time and setting of a story; and

(vii) understand the feelings and emotions of characters.

(4) Writing.

(A) Using a variety of techniques to select topics and to generate material to write about those topics. The student shall be provided opportunities to:

(i) use a variety of prewriting activities as sources for later writing; and

(ii) expand topics by collecting information from a variety of sources.

(B) Developing skills in writing effectively for a variety of purposes, modes, and audiences. The student shall be provided opportunities to:

(i) classify differences and likenesses of objects and events; and

(ii) arrange ideas and information, recognizing that drafts are rewritten to clarify them.

(C) Applying the conventions of writing to produce effective communications. The student shall be provided opportunities to:

(i) participate in rewriting conferences;

(ii) use a systematic method to spell words independently;

(iii) apply conventions of punctuation and capitalization;

(iv) write legible cursive letters; and

(v) join related sentences into paragraphs.

(5) Language. Developing skills in using the grammar of English for effective oral and written communication. The student shall be provided opportunities to:

(A) use irregular plurals of nouns correctly;

(B) use subject-verb agreement in person and number;

(C) use modifiers (adjectives and adverbs) correctly;

(D) produce basic sentence patterns and variations; and

(E) use the fundamentals of grammar, punctuation, and spelling.

(e) English language arts, grade four. English language arts, grade four, shall include the following essential elements:

(1) Listening. Developing skills in attending to, responding to, and analyzing oral communications. The student shall be provided opportunities to:

(A) employ active listening in a variety of situations;

(B) listen to appreciate sound devices of rhythm, rhyme, alliteration, and onomatopoeia;

(C) recognize a speaker's purpose for a presentation;

(D) select from an oral presentation the information needed; and

(E) distinguish between fact and opinion.

(2) Speaking.

(A) Developing fluency in using oral language to communicate effectively. The student shall be provided opportunities to:

(i) engage in creative dramatic activities and nonverbal communication;

(ii) use a variety of words to express feelings and ideas;

(iii) make organized oral presentations; and

(iv) participate on committees and panels and in group problem-solving activities.

(B) Speaking to accomplish a variety of purposes: informing, expressing, persuading, entertaining. The student shall be provided opportunities to:

(i) adapt content and formality of oral language to fit purpose and audience;

(ii) use a brief set of reasons to persuade a peer or an adult;

(iii) explain how to do something; and

(iv) present stories, puns, riddles, anecdotes, and plays for entertainment.

(3) Reading.

(A) Using word attack skills to decode written language. The student shall be provided opportunities to:

(i) use complex structural analysis to identify words with two or more prefixes and/or suffixes;

(ii) use context clues for word identification; and

(iii) use the dictionary as a key to pronunciation including phonetic respelling.

(B) Developing vocabulary to understand written material. The student shall be provided opportunities to:

(i) relate experiences with appropriate vocabulary in complete sentences;

(ii) understand words in context including modifying phrases or clauses;

(iii) understand content area vocabulary; and

(iv) use the dictionary to determine meaning of words.

(C) Using comprehension skills to gain meaning from whatever is read. The student shall be provided opportunities to:

(i) identify an implied main idea;

(ii) recall facts and details that support the main idea;

(iii) arrange events in sequential order when signal words are not stated;

(iv) distinguish between fact and nonfact including fiction and nonfiction;

(v) summarize a selection;

(vi) identify the multiple causes of a given event or a character's actions;

(vii) predict probable future outcomes; and

(viii) draw conclusions.

(D) Applying reading skills to a variety of practical situations. The student shall be provided opportunities to:

(i) follow multistep directions;

(ii) develop facility in oral reading for audience;

(iii) use parts of a book such as index, glossary;

(iv) use the dictionary and the encyclopedia to locate information;

(v) use graphic sources for information such as simple maps, globes, pictures, diagrams, and bar graphs; and

(vi) adjust the method and rate of reading to the purpose and type of material including study-type reading.

(E) Developing literary appreciation skills to provide personal enjoyment. The student shall be provided opportunities to:

(i) differentiate between figurative and literal language;

(ii) respond to various forms of literature;

(iii) become acquainted with a variety of selections, characters, and themes of our literary heritage;

(iv) select books for individual needs and interests;

(v) follow plot in longer stories that are not chronological;

(vi) describe the time and setting of story; and

(vii) understand the feelings and emotions of characters.

(4) Writing.

(A) Using a variety of techniques to select topics and to generate material to write about those topics. The student shall be provided opportunities to:

(i) use ideas and information from sources other than personal experiences for writing; and

(ii) expand topics by collecting information from a variety of sources.

(B) Developing skills in writing effectively for a variety of purposes, modes, and audiences. The student shall be provided opportunities to:

(i) present a set of reasons intended to persuade; and

(ii) delete superfluous information to address the purpose and audience more effectively.

(C) Applying the conventions of writing to produce effective communications. The student shall be provided opportunities to:

(i) participate in rewriting conferences;

(ii) use a systematic method to spell words independently;

(iii) apply conventions of punctuation and capitalization;

(iv) write legible cursive letters; and

(v) join related sentences into paragraphs.

(5) Language. Developing skill in using the grammar of English for effective oral and written communication. The student shall be provided opportunities to:

(A) use correct possessive forms of nouns and correct nominative, objective, and possessive forms of pronouns;

(B) use correct forms of irregular verbs;

(C) use modifiers (adjectives and adverbs) correctly;

(D) produce basic sentence patterns and variations; and

(E) use the fundamentals of grammar, punctuation, and spelling.

(f) English language arts, grade five. English language arts, grade five, shall include the following essential elements:

(1) Listening. Developing skill in attending to, responding to, and analyzing oral communications. The student shall be provided opportunities to:

(A) employ active listening in a variety of situations;

(B) listen to appreciate sound devices of rhythm, rhyme, alliteration, and onomatopoeia;

(C) follow the logical organization of an oral presentation;

(D) select from an oral presentation the information needed; and

(E) detect the use of propaganda and overgeneralizing.

(2) Speaking.

(A) Developing fluency in using oral language to communicate effectively. The student shall be provided opportunities to:

(i) engage in creative dramatic activities and nonverbal communication;

(ii) use a variety of words to express feelings and ideas;

(iii) make organized oral presentations; and

(iv) participate on committees and panels and in group problem-solving activities.

(B) Speaking to accomplish a variety of purposes such as informing, expressing, persuading, entertaining. The student shall be provided opportunities to:

(i) adapt content and formality of oral language to fit the purpose and audience;

(ii) use a set of reasons to persuade a group;

(iii) explain processes; and

(iv) present stories, puns, riddles, anecdotes, and plays for entertainment.

(3) Reading.

(A) Using word attack skills to decode written language. The student shall be provided opportunities to:

(i) use complex structural analysis to identify words with two or more prefixes and/or suffixes;

(ii) use context clues for word identification; and

(iii) use the dictionary as a key to pronunciation including phonetic respelling.

(B) Developing vocabulary to understand written material. The student shall be provided opportunities to:

(i) relate experiences with appropriate vocabulary in complete sentences;

(ii) use context to understand the meaning of words;

(iii) understand content area vocabulary; and

(iv) use the dictionary to determine formal and informal language.

(C) Using comprehension skills to gain meaning from whatever is read. The student shall be provided opportunities to:

(i) identify an implied main idea of a longer selection;

(ii) recall specific facts and details that support the main idea and/or conclusion;

(iii) arrange events in sequential order when sequence is not stated;

(iv) distinguish between fact and nonfact;

(v) summarize a selection;

(vi) understand cause and effect relationships;

(vii) predict probable future outcomes or actions;
(viii) draw logical conclusions;
(ix) make generalizations; and
(x) evaluate and make judgments.

(D) Applying reading skills to a variety of practical situations. The student shall be provided opportunities to:
(i) follow a set of directions;
(ii) develop facility in oral reading for audience;
(iii) use parts of a book such as preface, copyright page;
(iv) use the dictionary and the encyclopedia to locate information;
(v) use graphic sources for information such as tables and lists, charts and graphs, maps and globes, timelines, pictures and diagrams, scale drawings, transportation schedules; and
(vi) adjust the method and rate of reading to the purpose and type of material including study-type reading.

(E) Developing literary appreciation skills to provide personal enjoyment. The student shall be provided opportunities to:
(i) recognize that simile and metaphor involve comparison;
(ii) respond to various forms of literature;
(iii) become acquainted with a variety of selections, characters, and themes of our literary heritage;
(iv) select books for individual needs and interests;
(v) recognize differences in first and third person point of view;
(vi) describe the time and setting of story; and
(vii) explain and relate to the feelings and emotions of characters.

(4) Writing.

(A) Using a variety of techniques to select topics and to generate material to write about those topics. The student shall be provided opportunities to:
(i) use ideas and information from sources other than personal experiences for writing; and
(ii) select and narrow a topic for a specific purpose.

(B) Developing skills in writing effectively for a variety of purposes, modes, and audiences. The student shall be provided opportunities to:
(i) use chronological and spatial order and order of importance; and
(ii) rearrange information to accomplish a specific purpose with a particular audience.

(C) Applying the conventions of writing to produce effective communications. The student shall be provided opportunities to:
(i) participate in rewriting conferences;
(ii) spell increasingly complex words;
(iii) apply increasingly complex conventions of punctuation and capitalization;
(iv) write legible cursive letters; and
(v) use conventional formats (letters and commonly used forms).

(5) Language. Developing skill in using the grammar of English for effective oral and written communication. The student shall be provided opportunities to:
(A) use correct agreement between pronouns and antecedents;
(B) use correct forms of irregular verbs;
(C) use modifiers (adjectives and adverbs) correctly;
(D) use all other parts of speech correctly;
(E) produce a variety of sentence patterns; and
(F) use the fundamentals of grammar, punctuation, and spelling.

(g) English language arts, grade six. English language arts, grade six, shall include the following essential elements:

(1) Listening. Developing skill in attending to, responding to, and analyzing oral communications. The student shall be provided opportunities to:

(A) employ active listening in a variety of situations;

(B) listen to appreciate sound devices of rhythm, rhyme, alliteration, and onomatopoeia;

(C) follow the logical organization of an oral presentation;

(D) select from an oral presentation the information needed; and

(E) determine a speaker's motive, bias, and point of view.

(2) Speaking.

(A) Developing fluency in using oral language to communicate effectively. The student shall be provided opportunities to:

(i) engage in creative dramatic activities and nonverbal communication;

(ii) use a variety of words to express feelings and ideas;

(iii) manipulate articulation, rate, volume, and physical movement in oral presentations; and

(iv) respond to thoughts expressed by others through clarifying, qualifying, and extending ideas.

(B) Speaking to accomplish a variety of purposes such as informing, expressing, persuading, and entertaining. The student shall be provided opportunities to:

(i) adapt content and formality of oral language to fit purpose and audience;

(ii) use a set of reasons to persuade a group;

(iii) explain processes; and

(iv) relate stories, puns, riddles, anecdotes, and plays for entertainment.

(3) Reading.

(A) Using word attack skills to decode written language. The student shall be provided opportunities to:

(i) use complex structural analysis to identify words with two or more prefixes and/or suffixes;

(ii) use context clues for word identification; and

(iii) use the dictionary as a key to pronunciation including phonetic respelling.

(B) Developing vocabulary to understand written material. The student shall be provided opportunities to:

(i) relate experiences with appropriate vocabulary in complete sentences;

(ii) use context to understand the meaning of words;

(iii) understand content area vocabulary; and

(iv) use the dictionary to determine word origins and word histories.

(C) Using comprehension skills to gain meaning from whatever is read. The student shall be provided opportunities to:

(i) identify an implied main idea of a longer selection;

(ii) recall specific facts and details that support the main idea and/or conclusion;

(iii) arrange events in sequential order including time and degree of importance;

(iv) recognize various persuasive devices;

(v) summarize a selection;

(vi) understand cause and effect relationships;

(vii) predict probable future outcomes or actions;

(viii) draw logical conclusions;

(ix) make generalizations; and

(x) evaluate and make judgments.

(D) Applying reading skills to a variety of practical situations. The student shall be provided opportunities to:

(i) follow complex directions;

(ii) develop facility in oral reading for audience;
(iii) use parts of a book such as footnotes and appendices;
(iv) use periodicals, card catalogs, and reference works to locate information;
(v) compare the information on charts, graphs, tables, and lists; and
(vi) adjust the method and rate of reading to the purpose and type of material including study-type reading.

(E) Developing literary appreciation skills to provide personal enjoyment. The student shall be provided opportunities to:
(i) recognize personification as a literary device;
(ii) respond to various forms of literature;
(iii) become acquainted with a variety of selections, characters, and themes of our literary heritage;
(iv) select books for individual needs and interests;
(v) recognize differences in first and third person points of view;
(vi) describe the time and setting of story; and
(vii) explain and relate to the feelings and emotions of characters.

(4) Writing.

(A) Using a variety of techniques to select topics and to generate material to write about those topics. The student shall be provided opportunities to:
(i) generate material for writing independently and in a variety of ways; and
(ii) select and narrow a topic for a specific purpose.

(B) Developing skills in writing effectively for a variety of purposes, modes, and audiences. The student shall be provided opportunities to:
(i) vary word choice to accommodate the purpose and audience; and
(ii) use chronological and spatial order and order of importance.

(C) Applying the conventions of writing to produce effective communications. The student shall be provided opportunities to:
(i) participate in rewriting conferences;
(ii) spell increasingly complex words;
(iii) apply increasingly complex conventions of punctuation and capitalization;
(iv) write legible cursive letters;
(v) include in paragraphs a variety of kinds of complete sentences; and
(vi) use conventional formats (letters and commonly used forms).

(5) Language. Developing skills in using the grammar of English for effective oral and written communication. The student shall be provided opportunities to:
(A) use correct agreement between pronouns and antecedents;
(B) use correct subject-verb agreement with personal pronouns, indefinite pronouns, and compound subjects;
(C) use modifiers (adjectives and adverbs) correctly;
(D) use all other parts of speech correctly;
(E) produce, coordinate, and subordinate sentence elements appropriate to meaning; and
(F) use the fundamentals of grammar, punctuation, and spelling.

§75.22 *Other Languages.*

School districts are encouraged to offer other languages to the extent possible. For districts which offer other languages in a sequential program in kindergarten through grade six, the essential elements shall be those designated as Level I in §75.62 of this title (relating to Other Languages).

§75.23 *Mathematics.*

(a) Mathematics. Mathematics, kindergarten, shall include the following essential elements:

(1) Concepts and skills associated with the understanding of numbers (whole, integer, and non-negative rational) and the place-value system. The student shall be provided opportunities to experience at the readiness level:

(A) number concepts;

(B) one-to-one correspondence;

(C) ordering; and

(D) counting (objects).

(2) The basic operations on numbers (addition, subtraction, multiplication, division), their properties, and their uses. The student shall be provided opportunities to experience at the readiness level physical representations of addition and subtraction.

(3) Experience in solving problems by selecting and matching strategies to given situations. The student shall be provided opportunities to experience at the readiness level:

(A) oral problem solving with objects and stories; and

(B) identifying patterns.

(4) Measurement concepts and skills using metric and customary units. The student shall be provided opportunities to experience at the readiness level:

(A) comparing;

(B) identifying money; and

(C) identifying time units.

(5) Properties and relationships of geometric shapes and their applications. The student shall be provided opportunities to experience at the readiness level:

(A) classification;

(B) size and shape; and

(C) patterns.

(6) The representation of numbers on a line and pairs of numbers on a coordinate plane. The student shall be provided opportunities to experience at the readiness level ordering points on a line.

(7) The use of probability and statistics to collect and interpret data. The student shall be provided opportunities to experience at the readiness level using objects:

(A) classification; and

(B) ordering.

(b) Mathematics, grade one. Mathematics, grade one, shall include the following essential elements:

(1) Concepts and skills associated with the understanding of numbers (whole, integer, and non-negative rational) and the place-value system. The student shall be provided opportunities to:

(A) acquire number concepts through:

(i) counting (objects);

(ii) skip counting; and

(iii) comparing and ordering;

(B) use tens and ones to show place value; and

(C) recognize fractions (models).

(2) The basic operations on numbers (addition, subtraction, multiplication, division), their properties, and their uses. The student shall be provided opportunities to:

(A) acquire number operation concepts of joining and separating using manipulatives; and

(B) add and subtract whole numbers.

(3) Experience in solving problems by selecting and matching strategies to given situations. The student shall be provided opportunities to:

(A) apply addition and subtraction;

(B) identify story situations depicting the joining and separating process;
(C) draw pictures depicting the joining and separating process; and
(D) use modeling for presenting and solving problems.

(4) Measurement concepts and skills using metric and customary units. The student shall be provided opportunities to:

(A) measure (using measuring instruments); and
(B) use measurement units for:
(i) money;
(ii) time;
(iii) length;
(iv) weight/mass;
(v) liquid volume; and
(vi) temperature.

(5) Properties and relationships of geometric shapes and their applications. The student shall be provided opportunities to recognize and name models of two-dimensional shapes.

(6) The representation of numbers on a line and pairs of numbers on a coordinate plane. The student shall be provided opportunities to:

(A) order numbers; and
(B) locate points on a number line.

(7) The use of probability and statistics to collect and interpret data. The student shall be provided opportunities to:

(A) classify objects; and
(B) order numbers.

(c) Mathematics, grade two. Mathematics, grade two, shall include the following essential elements:

(1) Concepts and skills associated with the understanding of numbers (whole, integer, and non-negative rational) and the place-value system. The student shall be provided opportunities to:

(A) acquire number concepts through:
(i) comparing and ordering;
(ii) skip counting; and
(iii) investigating odds and evens;
(B) use hundreds, tens, and ones to show place value; and
(C) recognize fractions (models).

(2) The basic operations on numbers (addition, subtraction, multiplication, division), their properties, and their uses. The student shall be provided opportunities to:

(A) add and subtract whole numbers; and
(B) demonstrate multiplication concepts of whole numbers (using concrete materials).

(3) Experience in solving problems by selecting and matching strategies to given situations. The student shall be provided opportunities to:

(A) apply addition and subtraction; and
(B) use charts and graphs.

(4) Measurement concepts and skills using metric and customary units. The student shall be provided opportunities to:

(A) measure (using measuring instruments); and
(B) use measurement units of:
(i) money;
(ii) time;
(iii) length;
(iv) weight/mass;

(v) liquid volume; and

(vi) temperature.

(5) Properties and relationships of geometric shapes and their applications. The student shall be provided opportunities to recognize and name models of two- and three-dimensional shapes.

(6) The representation of numbers on a line and pairs of numbers on a coordinate plane. The student shall be provided opportunities to:

(A) locate points on a number line; and

(B) work with addition tables.

(7) The use of probability and statistics to collect and interpret data. The student shall be provided opportunities to:

(A) collect and organize information;

(B) read bar graphs; and

(C) make picture graphs.

(d) Mathematics, grade three. Mathematics, grade three, shall include the following essential elements:

(1) Concepts and skills associated with the understanding of numbers (whole, integer, and non-negative rational) and the place-value system. The student shall be provided opportunities to:

(A) compare and order;

(B) use odds, evens, and skip counting;

(C) use place value;

(D) identify decimal place value using money (tenths and hundredths);

(E) use fractions (models);

(F) recognize equivalent fractions (using models); and

(G) read and write whole numbers.

(2) The basic operations on numbers (addition, subtraction, multiplication, division), their properties, and their uses. The student shall be provided opportunities to:

(A) add and subtract whole numbers;

(B) add and subtract decimals using money;

(C) multiply whole numbers;

(D) divide whole numbers (using concrete materials); and

(E) recognize inverse operations.

(3) Experience in solving problems by selecting and matching strategies to given situations. The student shall be provided opportunities to:

(A) estimate with whole numbers;

(B) use basic operations with whole numbers and with decimals using money;

(C) use geometry; and

(D) use charts and graphs.

(4) Measurement concepts and skills using metric and customary units. The student shall be provided opportunities to:

(A) measure (using measuring instruments);

(B) solve problems using metric and customary unit measures (no conversion); and

(C) find perimeter.

(5) Properties and relationships of geometric shapes and their applications. The student shall be provided opportunities to identify characteristics of two- and three-dimensional shapes.

(6) The representation of numbers on a line and pairs of numbers on a coordinate plane. The student shall be provided opportunities to:

(A) locate points on a number line; and

(B) work with addition and multiplication tables.

(7) The use of probability and statistics to collect and interpret data. The student shall be provided opportunities to:

(A) collect and organize information; and

(B) interpret and construct picture and bar graphs.

(e) Mathematics, grade four. Mathematics, grade four, shall include the following essential elements:

(1) Concepts and skills associated with the understanding of numbers (whole, integer, and non-negative rational) and the place-value system. The student shall be provided opportunities to:

(A) compare and order;

(B) round numbers;

(C) use place value;

(D) use decimals (place value);

(E) use fractions (models);

(F) recognize equivalent fractions (using models); and

(G) read and write whole numbers and decimals.

(2) The basic operations on numbers (addition, subtraction, multiplication, division), their properties, and their uses. The student shall be provided opportunities to:

(A) add and subtract whole numbers and decimals;

(B) multiply whole numbers;

(C) divide whole numbers;

(D) use inverse operations; and

(E) add and subtract fractions using models (with like denominators).

(3) Experience in solving problems by selecting and matching strategies to given situations. The student shall be provided opportunities to:

(A) estimate with whole numbers and decimals;

(B) use basic operations with whole numbers, decimals, and fractions;

(C) use geometry; and

(D) use charts and graphs.

(4) Measurement concepts and skills using metric and customary units. The student shall be provided opportunities to:

(A) measure (using measuring instruments);

(B) solve problems using metric and customary unit measures (no conversion);

(C) find relationships between metric units;

(D) find perimeter; and

(E) find area (with grids).

(5) Properties and relationships of geometric shapes and their applications. The student shall be provided opportunities to:

(A) investigate the properties of two- and three-dimensional figures; and

(B) work with similarity, congruence, and symmetry.

(6) The representation of numbers on a line and pairs of numbers on a coordinate plane. The student shall be provided opportunities to draw number lines with fractions (like denominators) and decimals.

(7) The use of probability and statistics to collect and interpret data. The student shall be provided opportunities to:

(A) collect data and use to construct graphs;

(B) interpret pictographs and use information to solve story problems;

(C) list the possible outcomes in a given situation; and

(D) read and interpret line graphs.

(f) Mathematics, grade five. Mathematics, grade five, shall include the following essential elements:

(1) Concepts and skills associated with the understanding of numbers (whole, integer, and non-negative rational) and the place-value system. The student shall be provided opportunities to:

(A) compare and order;
(B) use exponential notation;
(C) round numbers;
(D) use place value;
(E) use decimals;
(F) use fractions (models); and
(G) identify equivalent fractions.

(2) The basic operations on numbers (addition, subtraction, multiplication, division), their properties, and their uses. The student shall be provided opportunities to:

(A) add, subtract, multiply, and divide whole numbers;
(B) add, subtract, and multiply decimals and fractions (not including mixed numbers); and
(C) use inverse operations.

(3) Experience in solving problems by selecting and matching strategies to given situations. The student shall be provided opportunities to:

(A) estimate with whole numbers and decimals;
(B) use basic operations with whole numbers, fractions, and decimals;
(C) apply geometric concepts; and
(D) use charts and graphs.

(4) Measurement concepts and skills using metric and customary units. The student shall be provided opportunities to:

(A) measure (using measuring instruments);
(B) use metric and customary units in applications (no conversion between systems of measure);
(C) convert units within the metric system;
(D) find perimeter and circumference;
(E) find area (with grids); and
(F) find volume (with cubes).

(5) Properties and relationships of geometric shapes and their applications. The student shall be provided opportunities to:

(A) use the properties of two- and three-dimensional figures;
(B) work with similarity, congruence, and symmetry; and
(C) find surface area (with models).

(6) The representation of numbers on a line and pairs of numbers on a coordinate plane. The student shall be provided opportunities to draw number lines with fractions and decimals.

(7) The use of probability and statistics to collect and interpret data. The student shall be provided opportunities to:

(A) collect data and use to construct graphs;
(B) interpret and construct charts and graphs;
(C) use counting arrangements; and
(D) predict possible outcomes from a sample.

(g) Mathematics, grade six. Mathematics, grade six, shall include the following essential elements:

(1) Concepts and skills associated with the understanding of numbers (whole, integer, and non-negative rational) and the place-value system. The student shall be provided opportunities to:

(A) study the history of numeration systems;
(B) round whole numbers and decimals;
(C) factor (primes and composites);

(D) use place value;
(E) find relationships between fractions, decimals, percents, and ratio;
(F) find the least common multiple;
(G) find the greatest common factor;
(H) use integers; and
(I) use exponential notation.

(2) The basic operations on numbers (addition, subtraction, multiplication, division), their properties, and their uses. The student shall be provided opportunities to:
(A) add, subtract, multiply, and divide integers;
(B) use inverse operations; and
(C) add, subtract, multiply, and divide fractions and decimals.

(3) Experience in solving problems by selecting and matching strategies to given situations. The student shall be provided opportunities to:
(A) estimate with whole numbers and decimals;
(B) use basic operations with whole numbers, fractions, and decimals;
(C) solve simple linear equations;
(D) apply geometric concepts; and
(E) use charts and graphs.

(4) Measurement concepts and skills using metric and customary units. The student shall be provided opportunities to:
(A) measure (using measuring instruments);
(B) use metric and customary units in applications (no conversion between systems of measure);
(C) find perimeter and circumference; and
(D) find area, surface area, and volume.

(5) Properties and relationships of geometric shapes and their applications. The student shall be provided opportunities to:
(A) use the properties of two- and three-dimensional figures;
(B) apply similarity, congruence, and symmetry in problem situations; and
(C) study translations, reflections, and rotations and their applications.

(6) The representation of numbers on a line and pairs of numbers on a coordinate plane. The student shall be provided opportunities to graph points on a coordinate plane.

(7) The use of probability and statistics to collect and interpret data. The student shall be provided opportunities to:
(A) collect data and use to construct graphs;
(B) interpret and construct charts and graphs;
(C) construct sample spaces;
(D) determine and interpret fractional probability;
(E) find averages; and
(F) apply probability and statistics concepts to solve problems.

§75.24 *Science.*

(a) Science, kindergarten, shall have a balance of content and activities from the life, earth, and physical sciences and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:
(A) use comparators: color, texture, taste, odor, size, shape, direction, motion, heat/cold, sink/float, sound; and
(B) practice safety.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:
(A) observe color, texture, size, shape of objects;

(B) observe objects in the environment; and

(C) observe events and changes in the environment.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify objects by comparing similarities and differences;

(B) classify objects from the environment as being living or nonliving; and

(C) arrange events in sequential order.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) describe objects from the environment; and

(B) describe external features of organisms.

(b) Science, grade one, shall have a balance of content and activities from the life, earth, and physical sciences and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:

(A) use hand magnifiers;

(B) use comparators: length, area, shape, height, size, texture, color; and

(C) practice safety.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe properties of selected plants and animals;

(B) observe the differences and similarities in the physical world; and

(C) identify a variety of simple machines.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify objects by comparing similarities and differences; and

(B) classify objects from the environment.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) describe objects and events (sunrise, sunset, flood) from the environment;

(B) describe apparent changes in size of objects at various distances;

(C) describe the human use of plants and animals; and

(D) name the senses.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to measure objects from the environment.

(c) Science, grade two, shall have a balance of content and activities from the life, earth, and physical sciences and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:

(A) use scales and balances;

(B) use thermometers;

(C) use comparators: mass, volume, symmetry, temperature, texture, size, shape;

(D) use rulers; and

(E) practice safety.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe patterns in properties of selected plants, animals, and objects;

(B) observe that time is based on counting regular events; and

(C) observe models from the life, earth, physical sciences.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify objects or selected plants and animals by comparing similarities and differences; and

(B) sequence objects and events.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) name objects from a description of their properties;

(B) describe what is shown in an illustration; and

(C) interpret the arrangement of data.

(5) Experience in concepts and skills of measurement using relationship to standards. The student shall be provided opportunities to record measurement of objects.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:

(A) predict the outcome of an action; and

(B) predict the uses organisms make of their environment.

(d) Science, grade three, shall have a balance of content and activities from the life, earth, and physical sciences and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:

(A) use simple machines;

(B) use comparators: time, distance, speed; and

(C) practice safety.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe patterns of growth in selected organisms;

(B) observe that life occurs in cycles; and

(C) observe physical structures.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify objects or events by comparing similarities and differences in their properties;

(B) classify simple machines; and

(C) classify natural resources.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) describe changes that occur in the environment;

(B) describe the event illustrated in a picture or diagram;

(C) describe three states of matter (solid, liquid, gas); and

(D) obtain science information from varied resources.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) record measurement of objects; and

(B) map and measure the locations of objects.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to predict the outcome of an action.

(e) Science, grade four, shall have a balance of content and activities from the life, earth, and physical sciences and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:

(A) use magnets;

(B) construct an electromagnet;

(C) use metric balances;

(D) use magnetic compasses;

(E) use comparators: mass, volume; and

(F) practice safety.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe phenomena and apply knowledge of facts and concepts; and

(B) observe that all living organisms depend on plants (food chains, food webs).

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to classify organisms, actions, or events according to similarities and differences.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) describe changes in objects and over a period of time (position, rate of speed);

(B) describe the changes that occur in weather and their effects;

(C) describe information obtained from charts, graphs, histograms; and

(D) describe how plants and animals protect themselves.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) collect information by measuring objects and recording data on graphs; and

(B) measure the growth of plants and animals.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to predict an outcome from a trend in data (weather forecasting, position of an object versus time and rate of speed).

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to:

(A) compare objects according to motion, mass, volume; and

(B) relate knowledge and skills of science to careers.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to apply knowledge of facts and concepts in explaining observations in experimental and controlled situations.

(f) Science, grade five, shall have a balance of content and activities from the life, earth, and physical sciences and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:

(A) construct models;

(B) use a microscope; and

(C) practice safety.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe phenomena of natural cycles;

(B) observe the results of phenomena associated with electricity (charges, magnetic poles); and

(C) observe the effects of phenomena associated with light or sound.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify objects, actions, or events according to similarities and differences;

(B) classify materials as being metallic or nonmetallic; and

(C) classify human body systems and their functions.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) describe changes in objects and events (rock cycles, life cycles, phases of the moon); and

(B) interpret meaningful arrangements of data.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) collect information by measuring objects and recording data on graphs and tables; and

(B) measure weather conditions (temperature, wind direction and speed, humidity).

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:

(A) predict an outcome from a trend in data; and

(B) predict cause-and-effect relationships.

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to:

(A) compare objects according to motion, volume, mass, and speed;

(B) relate knowledge and skills of science to careers; and

(C) compare various ecosystems.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to state the differences between objects and events using an operational definition.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to identify the variables being manipulated and the variables responding in an investigation.

(g) Science, grade six, shall have a balance of content and activities from the life, earth, and physical sciences and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:

(A) construct an electrical device (telegraph, electric motor);

(B) use a microscope;

(C) use acid-base indicators; and

(D) practice safety.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe phenomena and apply knowledge of facts, theories, laws, structures, and concepts;

(B) observe the cellular composition of organisms; and

(C) observe that energy can be changed from one form to another.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify organisms, objects, actions, or events according to similarities and differences;

(B) classify variables as being constant, manipulated, or responding; and

(C) classify substances as acid or base.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) describe the meaning of graphs and discuss factors that govern the rates of change;

(B) describe animal behaviors;

(C) describe the patterns of data;

(D) describe technological advances (computers, lasers, space and ocean exploration, communication systems);

(E) describe the sequence of events in an investigation; and

(F) describe consumer information from tables, labels, and advertisements.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to collect information by measuring and recording data on graphs, diagrams, and other visual materials.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:

(A) predict an outcome from a trend in data (extrapolation, interpolation);

(B) predict and compare the amount of energy used in various electrical devices; and

(C) deduce from given information the cause-and-effect relationships.

(7) Experience in skills relating objects and events to other objects and events. The student shall be provided opportunities to:

(A) compare factors that affect growth rate;

(B) compare the effects of the use of alternate energy sources; and

(C) relate knowledge and skills of science to careers.

(8) Experience in applying defined terms based on observation. The student shall be provided opportunities to state the differences between organisms, objects, and events using an operational definition.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to:

(A) identify the variables held constant, those variables being manipulated, and the variables responding in an investigation; and

(B) design and conduct an investigation.

§75.25 *Health.*

(a) Health, kindergarten, shall include the following essential elements:

(1) Concepts and skills that foster individual personal health and safety. The student shall be provided opportunities to:

(A) identify daily practices that promote:

(i) oral health;

(ii) cleanliness;

(iii) health of eyes and ears;

(iv) habits of rest, sleep, posture, and exercise;

(v) nutritional health; and

(vi) self-concept;

(B) recognize danger of poisonous substances;

(C) recognize hazards in the environment, and acquire knowledge and skills needed to avoid injury and to prevent accidents; and

(D) recognize negative effects of the use of alcohol, tobacco, marijuana, and other drugs, with special emphasis on illegal drugs.

(2) Health-related concepts and skills that involve interaction between individuals. The student shall be provided opportunities to recognize common examples of communicable diseases and identify practices that control their transmission.

(b) Health, grade one, shall include the following essential elements:

(1) Concepts and skills that foster individual personal health and safety. The student shall be provided opportunities to:

(A) identify daily practices that promote:

(i) oral health;

(ii) cleanliness;

(iii) health of eyes and ears;

(iv) habits of rest, sleep, posture, and exercise;

(v) nutritional health; and

(vi) self-concept;

(B) recognize need for adult supervision when taking medicines;

(C) recognize hazards in the environment, and acquire knowledge and skills needed to avoid injury and to prevent accidents; and

(D) recognize negative effects of the use of alcohol, tobacco, marijuana, and other drugs, with special emphasis on illegal drugs.

(2) Health-related concepts and skills that involve interaction between individuals. The student shall be provided opportunities to:

(A) recognize common examples of communicable diseases and identify practices that control their transmission; and

(B) recognize the health of the family is dependent upon the contributions of each of its members.

(3) Health-related concepts and skills that affect the well-being of people collectively. The student shall be provided opportunities to recognize interdependence of people and the environment, and recognize personal responsibility for protecting the environment.

(c) Health, grade two, shall include the following essential elements:

(1) Concepts and skills that foster individual personal health and safety. The student shall be provided opportunities to:

(A) identify daily practices that promote:

(i) oral health;

(ii) cleanliness;

(iii) health of eyes and ears;

(iv) habits of rest, sleep, posture, and exercise;

(v) nutritional health; and

(vi) self-concept;

(B) recognize benefits and limitations of medicines;

(C) recognize hazards in the environment, and acquire knowledge and skills needed to avoid injury and to prevent accidents; and

(D) recognize negative effects of the use of alcohol, tobacco, marijuana, and other drugs, with special emphasis on illegal drugs.

(2) Health-related concepts and skills that involve interaction between individuals. The student shall be provided opportunities to:

(A) recognize causes of communicable diseases; and

(B) recognize the health of the family is dependent upon the contributions of each of its members.

(3) Health-related concepts and skills that affect the well-being of people collectively. The student shall be provided opportunities to:

(A) recognize interdependence of people and the environment, and recognize personal responsibility for protecting the environment; and

(B) recognize sources of pollution.

(d) Health, grade three, shall include the following essential elements:

(1) Concepts and skills that foster individual personal health and safety. The student shall be provided opportunities to:

(A) identify daily practices that promote:

(i) oral health;

(ii) cleanliness;

(iii) health of eyes and ears;

(iv) habits of rest, sleep, posture, and exercise; and

(v) self-concept;

(B) make some food choices for self;

(C) recognize the negative effects of the use of alcohol, tobacco, marijuana, and other drugs, with special emphasis on illegal drugs;

(D) practice general emergency procedures; and

(E) recognize hazards in the environment, and acquire knowledge and skills needed to avoid injury and to prevent accidents.

(2) Health-related concepts and skills that involve interaction between individuals. The student shall be provided opportunities to:

(A) recognize causes of communicable diseases; and

(B) recognize the health of the family is dependent upon the contributions of each of its members.

(3) Health-related concepts and skills that affect the well-being of people collectively. The student shall be provided opportunities to:

(A) recognize interdependence of people and the environment, and recognize personal responsibility for protecting the environment; and

(B) recognize sources of pollution.

(e) Health, grade four, shall include the following essential elements:

(1) Concepts and skills that foster individual personal health and safety. The student shall be provided opportunities to:

(A) identify daily practices that promote:

(i) habits of rest, sleep, posture, and exercise; and

(ii) self-concept;

(B) relate fluoridation and snacking habits to dental health;

(C) recognize symptoms of vision and hearing problems;

(D) make some food choices for self;

(E) recognize negative effects of the use of alcohol, tobacco, marijuana, and other drugs, with special emphasis on illegal drugs;

(F) practice general emergency procedures; and

(G) recognize hazards in the environment, and acquire knowledge and skills needed to avoid injury and to prevent accidents.

(2) Health-related concepts and skills that involve interaction between individuals. The student shall be provided opportunities to:

(A) recognize benefits and limitations of advertising as it relates to selection of health services, products, and practitioners;

(B) identify communicable and noncommunicable diseases, their causes, symptoms, prevention, and treatment; and

(C) recognize the health of the family is dependent upon the contributions of each of its members.

(3) Health-related concepts and skills that affect the well-being of people collectively. The student shall be provided opportunities to:

(A) recognize scope of services provided by community health agencies;

(B) recognize interdependence of people and the environment, and recognize personal responsibility for protecting the environment; and

(C) recognize health consequences of pollution.

(f) Health, grade five, shall include the following essential elements:

(1) Concepts and skills that foster individual personal health and safety. The student shall be provided opportunities to:

(A) identify daily practices that promote self-concept;

(B) identify the structure of teeth and gums;

(C) recognize symptoms of vision and hearing problems;

(D) review examples of daily schedules that include adequate sleep, rest, and regular, vigorous physical activity;

(E) recognize nutritional concerns of adolescents;

(F) recognize negative effects of the use of alcohol, tobacco, marijuana, and other drugs, with special emphasis on illegal drugs;

(G) identify ways to care for the principal body systems; and

(H) recognize hazards in the environment, and acquire knowledge and skills needed to avoid injury and to prevent accidents.

(2) Health-related concepts and skills that involve interaction between individuals. The student shall be provided opportunities to:

(A) recognize benefits and limitations of advertising as it relates to selection of health services, products, and practitioners;

(B) identify communicable and noncommunicable diseases, their causes, symptoms, prevention, and treatment;

(C) recognize the health of the family is dependent upon the contributions of each of its members; and

(D) recognize need for first aid.

(3) Health-related concepts and skills that affect the well-being of people collectively. The student shall be provided opportunities to:

(A) identify locally available volunteer health agencies; and

(B) recognize interdependence of people and the environment, and recognize personal responsibility for protecting the environment.

(g) Health, grade six, shall include the following essential elements:

(1) Concepts and skills that foster individual personal health and safety. The student shall be provided opportunities to:

(A) identify daily practices that promote self-concept;

(B) recognize shared responsibility with parents for own dental care;

(C) recognize symptoms of vision and hearing problems;

(D) review examples of daily schedules that include adequate sleep, rest, and regular, vigorous physical activity;

(E) make healthful food choices in context of social environment;

(F) identify factors, including peer pressure, that contribute to alcohol, tobacco, marijuana, and other drug abuse and methods of prevention, with special emphasis on illegal drugs;

(G) identify ways to care for the principal body systems; and

(H) recognize hazards in the environment, and acquire knowledge and skills needed to avoid injury and to prevent accidents.

(2) Health-related concepts and skills that involve interaction between individuals. The student shall be provided opportunities to:

(A) recognize a logical process of selecting health services, products, and practitioners;

(B) identify communicable and noncommunicable diseases, their causes, symptoms, prevention, and treatment;

(C) recognize the health of the family is dependent upon the contributions of each of its members; and

(D) identify basic emergency treatment, including aid to persons choking or not breathing.

(3) Health-related concepts and skills that affect the well-being of people collectively. The student shall be provided opportunities to:

(A) relate the system of health services provided by government to the health needs of people; and

(B) recognize interdependence of people and the environment, and recognize personal responsibility for protecting the environment.

§75.26 *Physical Education.*

(a) Physical education, kindergarten, shall include the following essential elements:

(1) Physical fitness development to improve the quality of life. The student shall be provided opportunities to participate in developmental activities related to muscular strength and endurance, flexibility, and cardiorespiratory endurance.

(2) Motor skills that develop positive body image and confidence. The student shall be provided opportunities to:

(A) acquire fundamental movement skills:

(i) locomotor (walking, running, jumping, hopping, etc.);

(ii) nonlocomotor (bending and stretching, pushing and pulling, twisting and turning, etc.);

(iii) manipulative (working with bean bags, large balls, ropes, etc.); and

(iv) posture and body mechanics (standing, sitting, falling safely, etc.);

(B) develop perceptual awareness skills:

(i) body awareness (an awareness of name, location, and relationship of body parts);

(ii) spatial and directional awareness (an awareness of how much space the body occupies and where to move);

(iii) coordination (eye-hand, eye-foot, rhythm); and

(iv) balance.

(3) Rhythmic activities that develop coordination, self-expression, creativity, and endurance. The student shall be provided opportunities to participate in rhythmic activities:

(A) fundamental skills;

(B) creative rhythms; and

(C) singing games.

(4) Skills related to games and sports. The students shall be provided opportunities to:

(A) participate in skills common to games and sports (starting, stopping, dodging, throwing, kicking, catching, etc.);

(B) participate in low-organizational games; and

(C) develop and practice behavior reflective of good sportsmanship and safety.

(5) Sequential gymnastic and tumbling skills. The student shall shall be provided opportunities to:

(A) develop gross motor skills:

(i) orientation of one's body in space;

(ii) balance;

(iii) eye-body coordination;

(iv) upper body development; and

(B) participate in creeping, crawling, rolling, balancing, climbing, lifting one's body.

(b) Physical education, grade one, shall include the following essential elements:

(1) Physical fitness development to improve the quality of life. The student shall be provided opportunities to participate in developmental activities related to muscular strength and endurance, flexibility, and cardiorespiratory endurance.

(2) Motor skills that develop positive body image and confidence. The student shall be provided opportunities to:

(A) acquire fundamental movement skills:

(i) locomotor (walking, running, jumping, hopping, skipping, etc.);

(ii) nonlocomotor (bending and stretching, pushing and pulling, twisting and turning, etc.);

(iii) manipulative (working with bean bags, large balls, ropes, etc.); and

(iv) posture and body mechanics (standing, sitting, falling safely, etc.);

(B) develop perceptual awareness skills:

(i) body awareness (an awareness of name, location, and relationship of body parts);

(ii) spatial and directional awareness (an awareness of how much space the body occupies and where to move);

(iii) coordination (eye-hand, eye-foot, rhythm); and

(iv) balance.

(3) Rhythmic activities that develop coordination, self-expression, creativity, and endurance. The student shall be provided opportunities to participate in rhythmic activities:

(A) fundamental skills;

(B) creative rhythms; and

(C) singing games.

(4) Skills related to games and sports. The student shall be provided opportunities to:

(A) participate in skills common to games and sports (starting, stopping, dodging, throwing, kicking, catching, etc.)

(B) participate in games (low-organizational, creative, and cooperative); and

(C) develop and practice behavior reflective of good sportsmanship and safety.

(5) Sequential gymnastic and tumbling skills. The student shall be provided opportunities to:

(A) develop gross motor skills:

(i) orientation of one's body in space;

(ii) balance;

(iii) eye-body coordination; and

(iv) upper body development;

(B) participate in creeping, crawling, rolling, balancing, climbing, lifting one's body.

(c) Physical education, grade two, shall include the following essential elements:

(1) Physical fitness development to improve the quality of life. The student shall be provided opportunities to participate in developmental activities related to muscular strength and endurance, flexibility, and cardiorespiratory endurance.

(2) Motor skills that develop positive body image and confidence. The student shall be provided opportunities to:

(A) acquire fundamental movement skills:

(i) locomotor (walking, running, jumping, skipping, etc.);

(ii) nonlocomotor (bending and stretching, pushing and pulling, twisting and turning, etc.);

(iii) manipulative (working with bean bags, large balls, ropes, etc.); and

(iv) posture and body mechanics (standing, sitting, falling safely, etc.);

(B) develop perceptual awareness skills:

(i) body awareness (an awareness of name, location, and relationship of body parts);

(ii) spatial and directional awareness (an awareness of how much space the body occupies and where to move);

(iii) coordination (eye-hand, eye-foot, rhythm); and

(iv) balance.

(3) Rhythmic activities that develop coordination, self-expression, creativity, and endurance. The student shall be provided opportunities to participate in rhythmic activities:

(A) fundamental skills;

(B) creative rhythms; and

(C) singing games.

(4) Skills related to games and sports. The student shall be provided opportunities to:

(A) participate in skills common to games and sports (starting, stopping, dodging, throwing, kicking, catching, etc.);

(B) participate in games (low-organizational, creative, and cooperative); and

(C) develop and practice behavior reflective of good sportsmanship and safety.

(5) Sequential gymnastic and tumbling skills. The student shall be provided opportunities to:

(A) develop gross motor skills;

(i) orientation of one's body in space

(ii) balance;

(iii) eye-body coordination, and

(iv) upper body development;

(B) participate in creeping, crawling, rolling, balancing, lifting one's body.

(d) Physical education, grade three, shall include the following essential elements:

(1) Physical fitness development to improve the quality of life. The student shall be provided opportunities to:

(A) participate in developmental activities related to muscular strength and endurance, flexibility, and cardiorespiratory endurance; and

(B) participate in developmental activities for power, agility, speed, coordination, reaction, and balance.

(2) Motor skills that develop positive body image and confidence. The student shall be provided opportunities to:

(A) continue development of a combination of fundamental movement skills using balls and other equipment;

(B) continue development of perceptual awareness skills;

(i) coordination (eye-hand, eye-foot, rhythm); and

(ii) balance.

(3) Rhythmic activities that develop coordination, self-expression, creativity, and endurance. The student shall be provided opportunities to participate in rhythmic activities:

(A) rhythmic activities for endurance; and

(B) folk dance.

(4) Skills related to games and sports. The student shall be provided opportunities to:

(A) participate in games (low-organizational, creative, and cooperative);

(B) participate in lead-up and modified games;

(C) develop and practice behavior reflective of good sportsmanship and safety; and

(D) participate in contests and relays.

(5) Sequential gymnastic and tumbling skills. The student shall be provided opportunities to participate in gymnastics and tumbling.

(e) Physical education, grade four, shall include the following essential elements:

(1) Physical fitness development to improve the quality of life. The student shall be provided opportunities to:

(A) participate in developmental activities related to muscular strength and endurance, flexibility, and cardiorespiratory endurance;

(B) participate in developmental activities for power, agility, speed, coordination, reaction, and balance; and

(C) benefit from physical fitness testing and appraisal.

(2) Motor skills that develop positive body image and confidence. The student shall be provided opportunities to:

(A) continue development of a combination of fundamental movement skills using balls and other equipment;

(B) continue development of perceptual awareness skills:

(i) coordination (eye-hand, eye-foot, rhythm); and

(ii) balance.

(3) Rhythmic activities that develop coordination, self-expression, creativity, and endurance. The student shall be provided opportunities to participate in rhythmic activities:

(A) rhythmic activities for endurance; and

(B) folk dance.

(4) Skills related to games and sports. The student shall be provided opportunities to:

(A) participate in lead-up and modified games;

(B) participate in individual, team, and recreational games;

(C) develop and practice behavior reflective of good sportsmanship and safety; and

(D) participate in contests and relays.

(5) Sequential gymnastic and tumbling skills. The student shall be provided opportunities to participate in gymnastics and tumbling.

(f) Physical education, grade five, shall include the following essential elements:

(1) Physical fitness development to improve the quality of life. The student shall be provided opportunities to:

(A) participate in developmental activities related to muscular strength and endurance, flexibility, and cardiorespiratory endurance;

(B) participate in developmental activities for power, agility, speed, coordination, reaction, and balance; and

(C) benefit from physical fitness testing and appraisal.

(2) Motor skills that develop positive body image and confidence. The student shall be provided opportunities to:

(A) continue development of a combination of fundamental movement skills using balls and other equipment;

(B) continue development of perceptual awareness skills:

(i) coordination (eye-hand, eye-foot, rhythm); and

(ii) balance.

(3) Rhythmic activities that develop coordination, self-expression, creativity, and endurance. The student shall be provided opportunities to participate in rhythmic activities:

(A) rhythmic activities for endurance; and

(B) folk dance.

(4) Skills related to games and sports. The student shall be provided opportunities to:

(A) participate in lead-up and modified games;

(B) participate in individual, team, and recreational games;

(C) participate in individual, dual, and modified team sports;

(D) develop and practice behavior reflective of good sportsmanship and safety; and

(E) participate in contests and relays.

(5) Sequential gymnastic and tumbling skills. The student shall be provided opportunities to participate in gymnastics and tumbling.

(g) Physical education, grade six, shall include the following essential elements:

(1) Physical fitness development to improve the quality of life. The student shall be provided opportunities to:

(A) participate in developmental activities related to muscular strength and endurance, flexibility, and cardiorespiratory endurance;

(B) participate in developmental activities for power, agility, speed, coordination, reaction, and balance; and

(C) benefit from physical fitness testing and appraisal.

(2) Motor skills that develop positive body image and confidence. The student shall be provided opportunities to:

(A) continue development of a combination of fundamental movement skills using balls and other equipment;

(B) continue development of perceptual awareness skills:

(i) coordination (eye-hand, eye-foot, rhythm); and

(ii) balance.

(3) Rhythmic activities that develop coordination, self-expression, creativity, and endurance. The student shall be provided opportunities to participate in rhythmic activities:

(i) rhythmic activities for endurance; and

(ii) folk dance.

(4) Skills related to games and sports. The student shall be provided opportunities to:

(A) participate in individual, dual, and modified team sports;

(B) develop and practice behavior reflective of good sportsmanship and safety; and

(C) participate in contests and relays.

(5) Sequential gymnastic and tumbling skills. The student shall be provided opportunities to participate in gymnastics and tumbling.

§75.27 *Fine Arts.*

(a) Fine arts, kindergarten, shall include the following essential elements:

(1) Art.

(A) Awareness and sensitivity to natural and man-made environments. The student shall be provided opportunities to discover line, color, shape, and texture by seeing and feeling objects.

(B) Inventive and imaginative expression through art materials and tools. The student shall be provided opportunities to:

(i) express individual ideas, thoughts, and feelings in simple media including drawing, painting, and printmaking; and

(ii) experiment with art materials to understand properties and develop skills.

(C) Understanding and appreciation of self and others through art culture and heritage. The student shall be provided opportunities to look at and talk about contemporary and past artworks including primary sources and art visuals.

(D) Aesthetic growth through visual discriminiation and judgment. The student shall be provided opportunities to explore artwork of students and major artists.

(2) Music.

(A) Singing concepts and skills. The student shall be provided opportunities to:

(i) explore vocal sounds including imitation and recognition of environmental sounds, difference between singing and speaking voice, tone matching, rote singing of melodic patterns; and

(ii) sing songs including total group singing of action, seasonal, patriotic, and popular songs.

(B) Music listening. The student shall be provided opportunities to:

(i) recognize aurally including high/low, fast/slow, loud/soft, up/down, long/short, smooth/jerky;

(ii) hear short selections for quiet listening and expressive movement;

(iii) hear music that tells a story; and

(iv) listen to and identify simple music forms.

(C) Responses to music through moving and playing. The student shall be provided opportunities to:

(i) perform gross motor movement to records and singing including locomotor and axial;

(ii) perform action songs;

(iii) move to express mood or meaning of the music including steady beat and body sounds;

(iv) perform singing games; and

(v) explore sounds including environmental, body, homemade and commercial rhythm and melody instruments.

(3) Theatre arts.

(A) Expressive use of the body and voice. The student shall be provided opportunities to:

(i) develop body awareness and spatial perception using rhythmic and imitative movement; and

(ii) imitate sounds.

(B) Creative drama. The student shall be provided opportunities to dramatize limited-action stories and poems using simple pantomime.

(b) Fine arts, grade one, shall include the following essential elements:

(1) Art.

(A) Awareness and sensitivity to natural and man-made environments. The student shall be provided opportunities to:

(i) discover line, color, shape, and texture by seeing and feeling objects; and

(ii) understand formal structure in art including unity and emphasis.

(B) Inventive and imaginative expression through art materials and tools. The student shall be provided opportunities to:

(i) express individual ideas, thoughts, and feelings in simple media including drawing, painting, printmaking, and constructing 3-dimensional forms; and

(ii) experiment with art materials to understand properties and develop skills.

(C) Understanding and appreciation of self and others through art culture and heritage. The student shall be provided opportunities to look at and talk about contemporary and past artworks including primary sources and art visuals.

(D) Aesthetic growth through visual discrimination and judgment. The student shall be provided opportunities to:

(i) explore artwork of students and major artists; and

(ii) apply art knowledge and judgment through personal choices.

(2) Music.

(A) Singing concepts and skills. The student shall be provided opportunities to:

(i) explore vocal sounds including imitation and recognition of environmental sounds, difference between singing and speaking voice, tone matching, rote singing of melodic patterns;

(ii) sing songs including total group singing of action, seasonal, patriotic, and popular songs;

(iii) develop the voice including deep breathing for singing;

(iv) perform contrasts including high/low, up/down;

(v) recognize aurally the difference between melody and accompaniment, repeated sections; and

(vi) sing individually.

(B) Music listening. The student shall be provided opportunities to:

(i) recognize aurally high/low, fast/slow, loud/soft, up/down, long/short, smooth/jerky;

(ii) hear short selections for quiet listening and expressive movement;

(iii) hear music that tells a story;

(iv) recognize solo instruments by sound and sight; and

(v) listen to and identify simple music forms.

(C) Responses to music through moving and playing. The student shall be provided opportunities to:

(i) perform gross motor movement to records and singing including locomotor and axial;

(ii) perform action songs;

(iii) move to express mood or meaning of the music, steady beat and body sounds;

(iv) perform singing games; and

(v) accompany songs and records with body sounds and homemade or commercial rhythm and melody instruments.

(3) Theatre arts.

(A) Expressive use of the body and voice. The student shall be provided opportunities to:

(i) develop body awareness and spatial perception using rhythmic and imitative movement, and sensory awareness; and

(ii) imitate sounds.

(B) Creative drama. The student shall be provided opportunities to dramatize limited-action stories and poems using simple pantomime and puppetry.

(c) Fine arts, grade two, shall include the following essential elements:

(1) Art.

(A) Awareness and sensitivity to natural and man-made environments. The student shall be provided opportunities to:

(i) discover and explore line, color, shape, texture, value, form, and space; and

(ii) understand formal struture in art including unity, emphasis, balance, and variety.

(B) Inventive and imaginative expression through art materials and tools. The student shall be provided opportunities to:

(i) express individual ideas, thoughts, and feelings in simple media including drawing, painting, printmaking, and constructing and modeling 3-dimensional forms; and

(ii) experiment with art materials to understand properties and develop manipulative skills.

(C) Understanding and appreciation of self and others through art culture and heritage. The student shall be provided opportunities to look at and talk about contemporary and past artworks including primary sources and art visuals.

(D) Aesthetic growth through visual discrimination and judgment. The student shall be provided opportunities to:

(i) explore and examine artwork of students and major artists; and

(ii) apply art knowledge and judgment through personal choices.

(2) Music.

(A) Singing concepts and skills. The student shall be provided opportunities to:

(i) explore vocal sounds including imitation and recognition of environmental sounds, difference between singing and speaking voice, tone matching, and rote singing of melodic patterns;

(ii) sing songs including total group singing of action, seasonal, patriotic, and popular songs and rounds;

(iii) create dramatizations, movements, and new words to songs;

(iv) develop the voice including deep breathing for singing;

(v) perform contrasts including high/low, up/down, fast/slow, loud/soft;

(vi) recognize aurally the difference between melody and accompaniment, repeated sections, contrasting sections; and

(vii) sing individually.

(B) Music listening. The student shall be provided opportunities to:

(1) recognize aurally high/low, fast/slow, loud/soft, up/down, long/short, smooth/jerky, mood, difference between melody and accompaniment, repeated sections;

(ii) hear short selections for quiet listening and expressive movement;

(iii) hear music that tells a story;

(iv) recognize solo instruments by sound and sight; and

(v) listen to and identify simple music forms.

(C) Responses to music through moving and playing. The student shall be provided opportunities to:

(i) perform gross motor movement to records and singing including locomotor and axial;

(ii) perform action songs;

(iii) move to express mood and meaning of the music including steady beat and body sounds;

(iv) perform singing games;

(v) accompany songs and records with body sounds and homemade or commercial rhythm and melody instruments; and

(vi) imitate and perform simple melodic and rhythmic patterns and rhythms such as steady beat, rhythm of words, beat groupings of twos (march) and threes (waltz).

(3) Theatre arts.

(A) Expressive use of the body and voice. The student shall be provided opportunities to:

(i) develop body awareness and spatial perception using rhythmic and imitative movement, sensory awareness, and pantomime; and

(ii) imitate sounds and dialogue.

(B) Creative drama. The student shall be provided opportunities to dramatize literary selections using shadow play, pantomime, and imitative dialogue.

(d) Fine arts, grade three, shall include the following essential elements:

(1) Art.

(A) Awareness and sensitivity to natural and man-made environments. The student shall be provided opportunities to:

(i) discover, explore, and examine art elements including line, color, shape, texture, value, form, and space; and

(ii) understand formal structure in art including unity, emphasis, balance, and variety.

(B) Inventive and imaginative expression through art materials and tools. The student shall be provided opportunities to:

(i) express individual ideas, thoughts, and feelings in simple media including drawing, painting, printmaking, constructing and modeling 3-dimensional forms, and manipulating fibers; and

(ii) experiment with art materials to understand properties and develop manipulative skills.

(C) Understanding and appreciation of self and others through art culture and heritage. The student shall be provided opportunities to look at and talk about contemporary and past artworks including primary sources and art visuals.

(D) Aesthetic growth through visual discrimination and judgment. The student shall be provided opportunities to:

(i) explore and examine artwork of students and major artists; and

(ii) apply art knowledge and judgment through personal and home-related choices.

(2) Music.

(A) Singing concepts and skills. The student shall be provided opportunities to:

(i) sing songs including total group singing of action, seasonal, patriotic, and popular songs and rounds;

(ii) create dramatizations, movements, and new words to songs;

(iii) develop the voice including deep breathing for singing;

(iv) perform contrasts including high/low, up/down, fast/slow, loud/soft, same/different, long/short;

(v) recognize aurally the difference between melody and accompaniment, repeated sections, contrasting sections, and sections that return after a contrast;

(vi) sing individually; and

(vii) sing and identify simple music forms.

(B) Music listening. The student shall be provided opportunities to:

(i) recognize aurally high/low, fast/slow, loud/soft, up/down, long/short, smooth/jerky, mood, difference between melody and accompaniment, repeated sections, and contrasting sections;

(ii) hear music that tells a story;

(iii) recognize solo instruments by sound, sight, and categorize by families (woodwind, brass, strings, percussion); and

(iv) listen to and identify simple music forms.

(C) Responses to music through moving and playing. The student shall be provided opportunities to:

(i) perform gross motor movement to records and singing including locomotor and axial;

(ii) perform action songs;

(iii) move to express mood and meaning of the music including steady beat and body sounds;

(iv) perform singing games;

(v) accompany songs and records with body sounds and homemade or commercial rhythm and melody instruments; and

(vi) imitate and perform simple melodic and rhythmic patterns and rhythms including steady beat, rhythm of words, beat groupings of twos (march) and threes (waltz).

(3) Theatre arts.

(A) Expressive use of the body and voice. The student shall be provided opportunities to:

(i) develop body awareness and spatial perception using rhythmic and imitative movement, sensory awareness, and pantomime;

(ii) imitate sounds and dialogue; and

(iii) recall sensory and emotional experiences.

(B) Creative drama. The student shall be provided opportunities to dramatize literary selections using shadow play, pantomime, and imitative dialogue.

(C) Aesthetic growth through appreciation of theatrical events. The student shall be provided opportunities to view theatrical events emphasizing player-audience relationship and audience etiquette.

(e) Fine arts, grade four, shall include the following essential elements:

(1) Art.

(A) Awareness and sensitivity to natural and man-made environments. The student shall be provided opportunities to:

(i) discover, explore, and examine art elements including line, color, shape, texture, value, form, and space; and

(ii) understand formal structure in art including unity, emphasis, balance, variety, and pattern.

(B) Inventive and imaginative expression through art materials and tools. The student shall be provided opportunities to:

(i) express individual ideas, thoughts, and feelings in simple media including drawing, painting, printmaking, constructing and modeling three-dimensional forms, manipulating fibers, and exploring photographic imagery; and

(ii) experiment with art materials to understand properties and develop manipulative skills.

(C) Understanding and appreciation of self and others through art culture and heritage. The student shall be provided opportunities to:

(i) look at and talk about contemporary and past artworks including primary sources and art visuals; and

(ii) develop awareness of art careers.

(D) Aesthetic growth through visual discrimination and judgment. The student shall be provided opportunities to:

(i) explore, examine, and evaluate artwork of students and major artists, and home and community design; and

(ii) apply art knowledge and judgment through personal and home-related choices.

(2) Music. (Band, choral music, or orchestra may be offered in lieu of music.)

(A) Singing concepts and skills. The student shall be provided opportunities to:

(i) sing songs including total group singing of action, seasonal, patriotic, and popular songs and rounds;

(ii) create dramatizations, movements, new words to songs;

(iii) develop the voice including deep breathing for singing and clear diction;

(iv) perform contrasts including high/low, up/down, fast/slow, loud/soft, same/different, long/short;

(v) recognize aurally the difference between melody and accompaniment, repeated sections, contrasting sections, and sections that return after a contrast;

(vi) sing individually; and

(vii) sing and identify simple music forms.

(B) Music listening. The student shall be provided opportunities to:

(i) recognize aurally high/low, fast/slow, loud/soft, up/down, long/short, smooth/jerky, mood, difference between melody and accompaniment, repeated sections, contrasting sections, sections that return after a contrast;

(ii) hear music that tells a story;

(iii) recognize solo instruments by sound, sight, and categorize by families (woodwind, brass, strings, percussion);

(iv) hear music of other cultures; and

(v) listen to and identify simple music forms.

(C) Responses to music through moving and playing. The student shall be provided opportunities to:

(i) perform action songs;

(ii) move to express mood and meaning of the music including steady beat and body sounds;

(iii) play American folk games and perform ethnic dances;

(iv) accompany songs and records with body sounds and homemade or commercial rhythm and melody instruments;

(v) see, play, and sing simple melodic and rhythmic patterns, steady beat, beat groupings; and

(vi) recognize visually letter names of notes on treble staff.

(3) Theatre arts.

(A) Expressive use of the body and voice. The student shall be provided opportunities to:

(i) develop body awareness and spatial perception using rhythmic and imitative movement, sensory awareness, and pantomime;

(ii) express concepts using interpretive movement;

(iii) create original dialogue; and

(iv) recall sensory and emotional experiences.

(B) Creative drama. The student shall be provided opportunities to dramatize literary selections using shadow play, pantomime, imitative dialogue, improvisation, characterization, and puppetry.

(C) Aesthetic growth through appreciation of theatrical events. The student shall be provided opportunities to:

(i) view theatrical events emphasizing player-audience relationship, audience etiquette, and recognition of similarities and differences between television, film, and live theatre; and

(ii) participate in group planning for story dramatization incorporating analysis of character behavior, recognition of dramatic conflicts, and prediction of plot resolutions.

(f) Fine arts, grade five, shall include the following essential elements:

(1) Art.

(A) Awareness and sensitivity to natural and man-made environments. The student shall be provided opportunities to:

(i) discover, explore, examine, and apply art elements including line, color, shape, texture, value, form, and space; and

(ii) understand formal structure in art including unity, emphasis, balance, variety, pattern, and proportion.

(B) Inventive and imaginative expression through art materials and tools. The student shall be provided opportunities to:

(i) express individual ideas, thoughts, and feelings in simple media including drawing, painting, printmaking, constructing and modeling three-dimensional forms, manipulating fibers, and exploring photographic imagery; and

(ii) experiment with art materials to understand properties and develop manipulative skills.

(C) Understanding and appreciation of self and others through art culture and heritage. The student shall be provided opportunities to:

(i) look at and talk about contemporary and past artworks including primary sources and art visuals; and

(ii) develop awareness of art careers.

(D) Aesthetic growth through visual discrimination and judgment. The student shall be provided opportunities to:

(i) explore, examine, and evaluate artwork of students and major artists, and home and community design; and

(ii) apply art knowledge and judgment (person, home, and community).

(2) Music. (Band, choral music, or orchestra may be offered in lieu of music.).

(A) Singing concepts and skills. The student shall be provided opportunities to:

(i) sing songs including total group singing of action, seasonal, patriotic, and popular songs and rounds;

(ii) create dramatizations, movements, and new words to songs;

(iii) develop the voice including deep breathing for singing and clear diction;

(iv) perform contrasts including high/low, up/down, fast/slow, loud/soft, same/different, long/short;

(v) recognize aurally the difference between melody and accompaniment, repeated sections, contrasting sections, sections that return after a contrast;

(vi) sing individually; and

(vii) sing and identify simple music forms.

(B) Music listening. The student shall be provided opportunities to:

(i) recognize aurally high/low, fast/slow, loud/soft, up/down, long/short, smooth/jerky, mood, difference between melody and accompaniment, repeated sections, contrasting sections, sections that return after a contrast;

(ii) hear music that tells a story;

(iii) recognize solo instruments by sound, sight, and categorize by families (woodwind, brass, strings, percussion);

(iv) hear music of other cultures;

(v) hear American music including folk, spirituals, jazz, pop, country-western, serious composers; and

(vi) listen to and identify simple music forms.

(C) Responses to music through moving and playing. The student shall be provided opportunities to:

(i) move to express mood and meaning of the music including steady beat and body sounds;

(ii) perform American dances including round, line, and square;

(iii) play American folk instruments (guitar, ukulele, autoharp, etc.);

(iv) see, play, and sing simple melodic and rhythmic patterns, steady beat, beat groupings; and

(v) recognize visually letter names of notes on treble staff (A-G) and relationship of notes on staff (up, down, same).

(3) Theatre arts.

(A) Expressive use of the body and voice. The student shall be provided opportunities to:

(i) develop body awareness and spatial perception using rhythmic and imitative movement, sensory awareness, and pantomime;

(ii) express concepts using interpretive movement;

(iii) create original dialogue; and

(iv) utilize sensory and emotional recall in characterizations.

(B) Creative drama. The student shall be provided opportunities to dramatize literary selections and original stories using shadow play, pantomime, imitative dialogue, improvisation, characterization, and puppetry.

(C) Aesthetic growth through appreciation of theatrical events. The student shall be provided opportunities to:

(i) view theatrical events emphasizing player-audience relationship, audience etiquette, recognition of similarities and differences between television, film, and live theatre, and evaluation and aesthetic judgments; and

(ii) participate in group planning for story dramatization incorporating analysis of character behavior, recognition of dramatic conflicts, and prediction of plot resolutions.

(g) Fine arts, grade six. (When grade six is in a departmentalized middle school, students may elect any of the fine arts areas—art, music, theatre—to fulfill the fine arts requirement.) Fine arts, grade six, shall include the following essential elements:

(1) Art.

(A) Awareness and sensitivity to natural and man-made environments. The student shall be provided opportunities to:

(i) discover, explore, examine, and apply art elements including line, color, shape, texture, value, form, and space; and

(ii) organize, evaluate, and reorganize work in progress to gain further understanding of formal structuring including unity, emphasis, balance, variety, pattern, and proportion.

(B) Inventive and imaginative expression through art materials and tools. The student shall be provided opportunities to:

(i) express individual ideas, thoughts, and feelings in simple media including drawing, painting, printmaking, constructing and modeling three-dimensional forms, manipulating fibers, and exploring photographic imagery; and

(ii) experiment with art materials to understand properties and develop manipulative skills.

(C) Understanding and appreciation of self and others through art culture and heritage. The student shall be provided opportunities to:

(i) look at and talk about contemporary and past artworks including primary sources and art visuals; and

(ii) develop awareness of art careers.

(D) Aesthetic growth through visual discrimination and judgment. The student shall be provided opportunities to:

(i) explore, examine, and evaluate artwork of students, major artists, and home and community design; and

(ii) apply art knowledge and judgment (person, home, and community).

(2) Music. (Band, choral music, or orchestra may be offered in lieu of music.).

(A) Singing concepts and skills. The student shall be provided opportunities to:

(i) sing songs including total group singing of action, seasonal, patriotic, and popular songs and rounds;

(ii) create dramatizations, movements, and new words to songs;

(iii) develop the voice including deep breathing for singing, and clear diction;

(iv) perform contrasts including high/low, up/down, fast/slow, loud/soft, same/different, long/short;

(v) recognize aurally the difference between melody and accompaniment, repeated sections, contrasting sections, sections that return after a contrast;

(vi) sing individually;

(vii) sing in small groups; and

(viii) sing and identify simple music forms.

(B) Music listening. The student shall be provided opportunities to:

(i) recognize aurally high/low, fast/slow, loud/soft, up/down, long/short, smooth/jerky, mood, difference between melody and accompaniment, repeated sections, contrasting sections, sections that return after a contrast;

(ii) hear music that tells a story;

(iii) recognize solo instruments by sound, sight, and categorize by families (woodwind, brass, strings, percussion);

(iv) hear music of other cultures;

(v) hear American music including folk, spirituals, jazz, pop, country-western, serious composers;

(vi) hear music of other times in history including choral and instrumental; and

(vii) listen to and identify simple music forms.

(C) Responses to music through moving and playing. The student shall be provided opportunities to:

(i) move to express mood and meaning of the music including steady beat and body sounds;

(ii) perform folk dances of other countries;

(iii) play American folk instruments (guitar, ukulele, autoharp, etc.);

(iv) see, play, and sing simple melodic and rhythmic patterns, steady beat, beat groupings; and

(v) see, play, and sing letter names of notes on treble staff (A-G).

(3) Theatre arts.

(A) Expressive use of the body and voice. The student shall be provided opportunities to:

(i) develop body awareness and spatial perception using rhythmic and imitative movement, sensory awareness, and pantomime;

(ii) express concepts using interpretative movement;

(iii) create original dialogue; and

(iv) utilize sensory and emotional recall in characterizations.

(B) Creative drama. The student shall be provided opportunities to dramatize literary selections and original stories using shadow play, pantomime, imitative dialogue, improvisation, characterization, puppetry, and situation role-playing.

(C) Aesthetic growth through appreciation of theatrical events. The student shall be provided opportunities to:

(i) view theatrical events emphasizing player-audience relationship; audience etiquette; recognition of similarities and differences between television, film, and live theatre, and evaluation and aesthetic judgments; and

(ii) participate in group planning for story dramatization incorporating analysis of character behavior, recognition of dramatic conflicts, prediction of plot resolutions, and suggestions for alternative courses of action.

§75.28 *Social Studies, Texas and United States History.*

(a) Social studies, kindergarten. Social studies, kindergarten, shall include the following essential elements:

(1) Personal, social, and civic responsibilities. The student shall be provided opportunities to:

(A) recognize need to finish assigned tasks;

(B) discuss ways people can help each other;

(C) discuss socially acceptable and unacceptable behavior;

(D) practice rules of safety; and

(E) recognize safety symbols.

(2) The American economic system. The student shall be provided opportunities to:

(A) identify basic economic wants (food, clothing, shelter) of all people;

(B) understand the ways basic economic wants of family members are met; and

(C) identify property as "his/hers/mine/ours."

(3) Historical data about Texas, the United States, and the world. The student shall be provided opportunities to:

(A) identify important Texas and United States holidays; and

(B) recite national pledge of allegiance.

(4) Institutions and processes of local, state, national, and other political systems. The student shall be provided opportunities to:

(A) know and observe classroom rules;

(B) identify examples of right and wrong behavior; and

(C) explain the need for rules.

(5) Local, state, national, and world geography. The student shall be provided opportunities to:

(A) know terms related to direction and location (up/down, left/right, near/far);

(B) express relative sizes (large, small);

(C) identify school and community by name; and

(D) recognize that symbols and models (globes) represent real things.

(6) Psychological, sociological, and cultural factors affecting human behavior. The student shall be provided opportunities to:

(A) identify ways people learn from each other; and

(B) identify self by name, age, and birthdate.

(7) Social studies skills. The student shall be provided opportunities to predict consequences of behavior in a group.

(b) Social studies, grade one. Social studies, grade one, shall include the following essential elements:

(1) Personal, social, and civic responsibilities. The student shall be provided opportunities to:

(A) identify positive traits of self and others;

(B) identify and accept one's classroom responsibilities;

(C) contribute to group activities;

(D) discuss positive traits of friendship;

(E) complete assigned tasks; and

(F) discuss actions as honest or dishonest, fair or unfair.

(2) The American economic system. The student shall be provided opportunities to:

(A) identify the kind of work that school personnel and family members do;

(B) understand the concept of exchange;

(C) understand the concept of scarcity; and

(D) recognize the necessity of making economic choices among alternatives.

(3) Historical data about Texas, the United States, and the world. The student shall be provided opportunities to:

(A) know patriotic customs of the state and nation;

(B) know state and national anthems;

(C) identify symbols of the state and nation;

(D) use terms concerning time (yesterday, today, tomorrow); and

(E) know days of the week and months of the year.

(4) Institutions and processes of local, state, national, and other political systems. The student shall be provided opportunities to:

(A) explain the need for rules at home and school;

(B) identify school and community rules (laws); and

(C) identify authority figures in school and community.

(5) Local, state, national, and world geography. The student shall be provided opportunities to:

(A) know geographical location of home in relation to school and community;

(B) know geography of the school campus;

(C) know seasons of the year;

(D) identify state and nation by name;

(E) use simple classroom maps to locate information; and

(F) distinguish between land and water on maps and globes.

(6) Psychological, sociological, and cultural factors affecting human behavior. The student shall be provided opportunities to:

(A) describe how family members provide for each other's social needs; and

(B) describe similarities and differences among people.

(7) Social studies skills. The student shall be provided opportunities to:

(A) identify cause and effect relationships in the classroom and school; and

(B) discuss visuals (pictures, charts, graphs, tables).

(c) Social studies, grade two. Social studies, grade two, shall include the following essential elements:

(1) Personal, social, and civic responsibilities. The student shall be provided opportunities to:

(A) explain acceptable ways of dealing with individual and group conflicts;

(B) accept responsibility for one's actions;

(C) volunteer for leadership activities; and

(D) follow standards of honesty and fairness.

(2) The American economic system. The student shall be provided opportunities to:

(A) distinguish between goods and services;

(B) describe how people depend on each other to supply economic goods and services;

(C) identify persons who provide goods and services to the community;

(D) distinguish between making (producing) and using (consuming) things; and

(E) identify the kinds of income people receive (wages, salaries, rent, profits).

(3) Historical data about Texas, the United States, and the world. The student shall be provided opportunities to:

(A) identify individuals of past and present significance to the community;

(B) know significance of major historical celebrations in the community; and

(C) explain symbolism of state and national flags.

(4) Institutions and processes of local, state, national, and other political systems. The student shall be provided opportunities to:

(A) identify some governmental services in the community;

(B) know who makes rules and laws in the community; and

(C) understand consequences for violating rules of the school.

(5) Local, state, national, and world geography. The student shall be provided opportunities to:

(A) identify various types of transportation and communication;

(B) identify local natural landforms;

(C) note effects of seasonal change on the local environment;

(D) make and use simple neighborhood maps;

(E) interpret map keys and symbols;

(F) know and use cardinal directions (north, south, east, west); and

(G) locate one's community, Texas, and the United States on maps and globes.

(6) Psychological, sociological, and cultural factors affecting human behavior. The student shall be provided opportunities to:

(A) identify several groups to which students belong;

(B) describe family traditions and customs; and

(C) know common responsibilities of family members in any culture.

(7) Social studies skills. The student shall be provided opportunities to:

(A) differentiate between fact and fiction in historical contexts; and

(B) make simple visuals (pictures, charts, graphs, tables).

(d) Social studies, grade three. Social studies, grade three, shall include the following essential elements:

(1) Personal, social, and civic responsibilities. The student shall be provided opportunities to:

(A) understand that individuals have the right to hold differing viewpoints;
(B) identify students' responsibilities to the community and state; and
(C) demonstrate respect for public and private property.

(2) The American economic system. The student shall be provided opportunities to:
(A) describe ways a community satisfies needs for food, clothing, and shelter;
(B) give examples of specialization and division of labor in a community;
(C) give examples of public and private property; and
(D) name economic resources located in and around the community.

(3) Historical data about Texas, the United States, and the world. The student shall be provided opportunities to:
(A) describe some ways one's community has changed over time;
(B) identify and know significance of historical landmarks in the community; and
(C) know basic facts of the community's founding.

(4) Institutions and processes of local, state, national, and other political systems. The student shall be provided opportunities to:
(A) know how community and state laws are enforced;
(B) identify basic functions of local and state government; and
(C) know consequences of violating laws of the community.

(5) Local, state, national, and world geography. The student shall be provided opportunities to:
(A) know geographical location of community relative to state and nation;
(B) describe the physical features of one's community;
(C) describe how one's community is similar and different from other communities;
(D) locate the continents and major bodies of water on maps and globes;
(E) use intermediate directions (NW, SE, etc.) to interpret maps;
(F) use scale to determine distance on a simple map;
(G) locate points on a grid; and
(H) use a compass rose to determine direction.

(6) Psychological, sociological, and cultural factors affecting human behavior. The student shall be provided opportunities to:
(A) identify local traditions, customs, and folkways;
(B) describe how individuals and families change over time; and
(C) identify racial and ethnic contributions in the community and state.

(7) Social studies skills. The student shall be provided opportunities to:
(A) identify multiple causes of events in communities, past and present; and
(B) interpret legends or keys on visuals.

(e) Social studies, grade four. Social studies, grade four, shall include the following essential elements:

(1) Personal, social, and civic responsibilities. The student shall be provided opportunities to:
(A) accept the responsibilities of membership in various groups;
(B) support individuals' rights to have differing opinions; and
(C) explain how groups influence individual behavior.

(2) The American economic system. The student shall be provided opportunities to:
(A) explain the importance of economic interdependence within and among regions of Texas;
(B) understand Texas' economic relationships to other states and to the world;
(C) identify examples of the factors of production (land, labor, capital, enterprise); and
(D) identify major economic resources of regions of Texas.

(3) Historical data about Texas, the United States, and the world. The student shall be provided opportunities to:
(A) describe the influence of geography on the history of Texas;

(B) know basic facts about the founding of Texas as a republic and a state; and

(C) identify significant individuals and their contributions to Texas history.

(4) Institutions and processes of local, state, national, and other political systems. The student shall be provided opportunities to:

(A) distinguish among city, county, state, and nation; and

(B) identify executive, legislative, and judicial roles at local and state levels.

(5) Local, state, national, and world geography. The student shall be provided opportunities to:

(A) describe how the various geographical regions of Texas, the United States, and the world are similar and different;

(B) understand how people adapt to their physical environment;

(C) know how landforms and climate interact;

(D) describe landforms and climates of various regions of Texas;

(E) locate major geographical features of Texas on maps and globes;

(F) locate the prime meridian and equator on maps and globes;

(G) explain the purpose of latitude and longitude (parallels and meridians); and

(H) use latitude and longitude to locate places on a state map.

(6) Psychological, sociological, and cultural factors affecting human behavior. The student shall be provided opportunities to:

(A) describe how traditions, customs, folkways, and religious beliefs differ among individuals and groups; and

(B) describe the influence of other cultures on Texas.

(7) Social studies skills. The student shall be provided opportunities to:

(A) distinguish between personal opinions and factual accounts of events in social studies materials; and

(B) interpret visuals (pictures, charts, graphs, tables).

(f) Social studies, grade five. Social studies, grade five, shall include the following essential elements:

(1) Personal, social, and civic responsibilities. The student shall be provided opportunities to:

(A) identify traits of democratic leadership;

(B) respect right of others to behave in ways consistent with personal and societal value systems;

(C) follow standards of ethical and moral conduct; and

(D) identify basic civic values of American society.

(2) The American economic system. The student shall be provided opportunities to:

(A) describe economic activities in regions of the United States;

(B) explain why conservation of economic resources is important;

(C) describe how transportation and communications have contributed to economic interdependence within the United States;

(D) describe buyers' and sellers' reactions to price (laws of demand and supply) and market clearing price; and

(E) explain how ways of work have changed over time.

(3) Historical data about Texas, the United States, and the world. The student shall be provided opportunities to:

(A) identify causes of historical events or actions in United States history;

(B) know significant American leaders and their contributions to American history; and

(C) describe major historical events in the development of the United States.

(4) Institutions and processes of local, state, national, and other political systems. The student shall be provided opportunities to:

(A) understand basic organization of the national government;

(B) identify major American political documents and their purposes;

(C) explain basic rights and responsibilities of American citizens; and

(D) identify major political parties and their symbols.

(5) Local, state, national, and world geography. The student shall be provided opportunities to:

(A) describe how the various geographic regions of the United States are similar and different;

(B) understand how people have adapted to and modified the physical environment of the United States;

(C) understand the geographic interrelatedness of the United States and adjacent countries;

(D) describe the landforms and climates of various regions of the United States;

(E) locate major geographical features of the United States on maps and globes;

(F) use latitude and longitude to determine directions and locations on a United States map; and

(G) use scale to determine distance within the United States.

(6) Psychological, sociological, and cultural factors affecting human behavior. The student shall be provided opportunities to:

(A) identify holidays and celebrations in the nation that are cultural-group related; and

(B) identify the contributions of various cultures to the American way of life (art, literature, music, etc.).

(7) Social studies skills. The student shall be provided opportunities to:

(A) sequence events on a timeline;

(B) locate information in reference works (atlas, almanac, encyclopedia, etc.);

(C) classify social studies materials as primary or secondary; and

(D) evaluate information from various social studies sources.

(g) Social studies, grade six. Social studies, grade six, shall include the following essential elements:

(1) Personal, social, and civic responsibilities. The student shall be provided oppportunities to:

(A) explain the role of compromise as a method of resolving conflicts;

(B) support the principle of majority rule and minority rights; and

(C) respect individual's right to hold different political and religious beliefs.

(2) The American economic system. The student shall be provided opportunities to:

(A) explain the economic importance of various regions of the world;

(B) explain and give examples of economic interdependence among nations;

(C) recognize the value and dignity of work;

(D) describe characteristics of each type of major economic system (free enterprise market, command); and

(E) understand the role of competition in a market economy.

(3) Historical data about Texas, the United States, and the world. The student shall be provided opportunities to:

(A) identify contributions of various cultures, past and present, to world civilization;

(B) identify significant individuals and their contributions to world history;

(C) identify major world civilizations in history; and

(D) describe major events in world history.

(4) Institutions and processes of local, state, national, and other political systems. The student shall be provided opportunities to:

(A) identify contributions of other countries to the American political system; and

(B) describe the characteristics of each type of political system (rule by one, few, or many) in selected countries.

(5) Local, state, national, and world geography. The student shall be provided opportunities to:

(A) compare cultural regions of the world;

(B) describe population patterns of the world;

(C) describe the impact of physical features on selected cultures, past and present;

(D) locate and describe landforms and climates of various regions;

(E) describe how the geographic regions of the world are similar and different;

(F) recognize various types of map projections; and

(G) use latitude and longitude to locate sites on maps and globes.

(6) Psychological, sociological, and cultural factors affecting human behavior. The student shall be provided opportunities to:

(A) describe examples of cultural borrowing among societies;

(B) identify basic institutions common to all cultures;

(C) describe how written and unwritten laws and rules (mores and customs) of a society affect individual and group behavior; and

(D) recognize that decisions made in one's self interest may benefit others.

(7) Social studies skills. The student shall be provided opportunities to:

(A) make and interpret timelines;

(B) compare and contrast opposing viewpoints; and

(C) organize data to support or refute a viewpoint.

§75.41 *English Language Arts.*

(a) English language arts, grade seven (1 unit). English language arts, grade seven, shall include the following essential elements:

(1) Writing concepts and skills. The student shall be provided opportunities to:

(A) use the composing process to plan and generate writing;

(B) write for a variety of purposes and audiences;

(C) synthesize information from several sources;

(D) use direct quotations from written and oral sources;

(E) use formal and informal language appropriately;

(F) substitute specific words for general words;

(G) omit sentence fragments, run-on sentences, nonagreement, and faulty tense changes;

(H) proofread for punctuation, capitalization, spelling, and syntax; and

(I) apply common generalizations about spelling.

(2) Language concepts and skills. The student shall be provided opportunities to:

(A) use objects, complements, phrases, and clauses to produce a variety of simple, compound, and complex sentences;

(B) use all parts of speech correctly, including nouns, pronouns, verbs, adjectives, adverbs, prepositions, conjunctions, and interjections, in written and oral communication;

(C) use oral language effectively for a variety of purposes and audiences;

(D) use the fundamentals of grammar, punctuation, and spelling;

(E) use correct agreement between subjects and verbs and between pronouns and antecedents; and

(F) use correct subject-verb agreement with personal pronouns, indefinite pronouns, and compound subjects.

(3) Literature concepts and skills. The student shall be provided opportunities to:

(A) follow plot and character development in stories;

(B) recognize figurative language;

(C) recognize literary traditions of cultural groups; and

(D) recognize folk literature, legends, and myths.

(4) Reading concepts and skills. The student shall be provided opportunities to:

(A) choose appropriate meaning of multimeaning words;

(B) identify and evaluate main idea statements;

(C) arrange details in sequential order;

(D) perceive cause and effect relationships;

(E) predict probable future actions;

(F) summarize and make generalizations;

(G) distinguish between fact and nonfact;

(H) identify the author's point of view and purpose;

(I) follow written directions including substeps; and

(J) use the card catalog and standard library references.

(5) Speaking and listening skills. The student shall be provided opportunities to:

(A) participate in group discussions;

(B) present information in a variety of oral situations;

(C) follow ways a speaker signals important ideas and examples;

(D) respond appropriately to a presenter; and

(E) take notes from an oral presentation.

(b) English language arts, grade eight (1 unit). English language arts, grade eight, shall include the following essential elements:

(1) Writing concepts and skills. The student shall be provided opportunities to:

(A) use the composing process to plan and generate writing;
(B) write for a variety of purposes and audiences;
(C) demonstrate clear and logical thinking in support and development of a central idea;
(D) evaluate the content and organization of one's own writing as well as that of others;
(E) use formal and informal language appropriately;
(F) avoid cliches and trite expressions;
(G) use punctuation and capitalization appropriately in writing;
(H) omit sentence fragments, run-on sentences, nonagreement, and faulty tense changes;
(I) edit for clarity of language, appropriate word choice, and effective sentences;
(J) apply common generalizations about spelling; and
(K) use the dictionary to check spelling.

(2) Language concepts and skills. The student shall be provided opportunities to:

(A) use objects, complements, phrases, and clauses to produce a variety of simple, compound, and complex sentences;

(B) use all parts of speech correctly, including nouns, pronouns, verbs, adjectives, adverbs, prepositions, conjunctions, and interjections, in written and oral communication;

(C) use common affixes to change words from one part of speech to another;
(D) use oral language effectively for a variety of purposes and audiences;
(E) use the fundamentals of grammar, punctuation, and spelling;
(F) use correct agreement between subjects and verbs and between pronouns and antecedents; and

(G) use correct subject-verb agreement with personal pronouns, indefinite pronouns, and compound subjects.

(3) Literature concepts and skills. The student shall be provided opportunities to:
(A) follow more complex plot and character development in stories;
(B) recognize the ways in which figurative language and sound devices contribute to meaning;
(C) describe plot, setting, character, and mood in more complex literary selections;
(D) recognize different types of literature: short stories, novels, poems, and plays; and
(E) recognize the basic types and characteristics of nonfiction.

(4) Reading concepts and skills. The student shall be provided opportunities to:
(A) choose the appropriate meaning of multimeaning words;
(B) identify implied main ideas and related details;
(C) distinguish between and evaluate fact and nonfact;
(D) identify the sequential order of events;
(E) perceive cause and effect relationships;
(F) identify the author's point of view and purpose;
(G) predict probable future actions and outcomes;
(H) arrive at a generalization from a given series of details and/or assumptions;
(I) use parts of a book;
(J) interpret diagrams, graphs, and statistical illustrations; and
(K) use the card catalog and standard references.

(5) Speaking and listening skills. The student shall be provided opportunities to:
(A) participate in group discussion;
(B) present information in a variety of oral situations;
(C) follow ways a speaker signals important ideas and examples;
(D) respond appropriately to a presenter; and
(E) take notes from an oral presentation.

(c) Reading, grade seven (1 unit). Reading, grade seven, shall include the following essential elements:

(1) Word attack skills to decode written language. The student shall be provided opportunities to:
(A) apply contextual clues;
(B) use word structure analysis; and

(C) use advanced dictionaries for word pronunciation.

(2) Vocabulary development to understand written materials. The student shall be provided opportunities to:

(A) use advanced dictionaries for determining word meaning; and

(B) choose appropriate meaning of multimeaning words.

(3) Comprehension skills to gain meaning from whatever is read. The student shall be provided opportunities to:

(A) identify and evaluate main ideas and subordinate related details;

(B) arrange details in sequential or simultaneous order;

(C) perceive cause and effect relationships;

(D) summarize and make generalizations;

(E) distinguish between facts and fictional details;

(F) recognize author's purpose, point of view, and opinion;

(G) compare and contrast viewpoints on the same topic; and

(H) predict probable future actions or outcomes; and

(I) draw conclusions.

(4) Reading skills applied to a variety of practical situations. The student shall be provided opportunities to:

(A) follow written directions including substeps;

(B) identify the form and function of the various parts of a book;

(C) use the card catalog and standard library references;

(D) interpret diagrams, graphs, and statistical illustrations; and

(E) vary rate of reading according to purpose.

(d) Reading, grade eight (1 unit). Reading, grade eight, shall include the following essential elements:

(1) Word attack skills to decode written language. The student shall be provided opportunities to:

(A) use structural analysis: Greek and Latin prefixes and roots;

(B) use contextual clues to determine pronunciation of words; and

(C) use advanced dictionaries.

(2) Vocabulary development to understand written materials. The student shall be provided opportunities to:

(A) choose the appropriate meaning of multimeaning words; and

(B) use specialized and technical vocabulary related to specific content areas.

(3) Comprehension skills to gain meaning from whatever is read. The student shall be provided opportunities to:

(A) identify implied main ideas and related details;

(B) identify and evaluate author's point of view, purpose, and opinions;

(C) distinguish between and evaluate fact and nonfact;

(D) predict probable future actions or outcomes;

(E) arrive at a generalization from a given series of details and/or assumptions;

(F) identify the sequential order of events;

(G) perceive cause and effect relationships; and

(H) recognize forms of propaganda.

(4) Reading skills applied to a variety of practical situations. The student shall be provided opportunities to:

(A) follow complex written directions;

(B) use parts of a book such as visual aids, chapter headings and subheadings, italics, color coding, marginal notes, footnotes, jacket summaries, appendices;

(C) locate, select, and organize information from periodicals and a variety of reference materials;

(D) interpret diagrams, graphs, and statistical illustrations;
(E) vary rate of reading according to purpose; and
(F) use phrasing, cadence, and stress to reflect meaning, mood, and tone in oral reading.

(e) Reading improvement, grade seven (1 unit). Reading improvement, grade seven, shall include the following essential elements:

(1) Word attack skills to decode written language. The student shall be provided opportunities to:
(A) apply phonic analysis;
(B) use contextual clues;
(C) use structural analysis; and
(D) use the dictionary as a key to pronunciation.

(2) Vocabulary development to understand written materials. The student shall be provided opportunities to:
(A) choose appropriate meaning of multimeaning words; and
(B) expand vocabulary in content areas.

(3) Comprehension skills to gain meaning from whatever is read. The student shall be provided opportunities to:
(A) select the directly stated or implied main idea in paragraphs and in longer selections;
(B) recognize specific facts and details supporting the main idea;
(C) arrange events in sequential order;
(D) make inferences and draw conclusions;
(E) distinguish between fact and opinion;
(F) perceive cause and effect relationships; and
(G) predict probable future outcomes or actions.

(4) Reading skills applied to a variety of practical situations. The student shall be provided opportunities to:
(A) follow a set of written directions;
(B) use a card catalog and standard library references;
(C) use parts of a book; and
(D) use graphic sources: charts, graphs, maps, diagrams.

(f) Reading improvement, grade eight (1 unit). Reading improvement, grade eight, shall include the following essential elements:

(1) Word attack skills to decode written language. The student shall be provided opportunities to:
(A) demonstrate basic word attack skills: phonic analysis, structural analysis, contextual clues; and
(B) use the dictionary as a key to pronunciation: phonetic respelling, syllabication, accents.

(2) Vocabulary development to understand written materials. The student shall be provided opportunities to:
(A) select the appropriate meaning of multimeaning words; and
(B) recognize vocabularies associated with a variety of content areas.

(3) Comprehension skills to gain meaning from whatever is read. The student shall be provided opportunities to:
(A) identify the implied main idea;
(B) choose supporting facts and details;
(C) arrange events in sequential order;
(D) perceive cause and effect relationships;
(E) summarize and make generalizations; and
(F) analyze information and make judgments on the basis of information given.

(4) Reading skills applied to a variety of practical situations. The student shall be provided opportunities to:

(A) follow written directions including substeps;
(B) use various parts of a book: chapter headings, marginal notes, footnotes, appendices;
(C) interpret graphic materials: diagrams, graphs, charts, maps, globes, schedules; and
(D) use reference materials: dictionaries, encyclopedias, catalogs, almanacs, periodicals, newspapers.

(g) Speech, grades seven and/or eight (½-1 unit). Speech, grades seven and/or eight, shall include the following essential elements:

(1) Enhancement of positive self-image, self-esteem, and self-confidence. The student shall be provided opportunities to:
(A) develop an awareness of each person's uniqueness;
(B) recognize that appropriate speaking skills are valuable assets now and in the future; and
(C) reach for self-actualization.

(2) Interpersonal and group communication. The student shall be provided opportunities to:
(A) participate in a variety of kinds of formal and informal group discussions; and
(B) learn to express one's own feelings appropriately.

(3) The basic communication process. The student shall be provided opportunities to:
(A) recognize the elements of the communication process;
(B) recognize good and bad listening habits;
(C) exhibit critical listening skills;
(D) formulate ideas;
(E) express ideas effectively;
(F) recognize the rights of others to have differing viewpoints;
(G) recognize and use nonverbal language; and
(H) examine the basic vocal process.

(4) Types of speeches. The student shall be provided opportunities to:
(A) evaluate speeches given by others;
(B) explore the use of the voice and body in speaking situations;
(C) examine the different purposes for speaking;
(D) organize ideas;
(E) prepare and deliver various speeches; and
(F) establish criteria for evaluation.

(5) Interpretive reading. The student shall be provided opportunities to:
(A) choose appropriate material for oral presentation;
(B) analyze literary selections;
(C) perform selections as an individual or with a group; and
(D) establish criteria for evaluation.

§75.42 *Other Languages.*

School districts are encouraged to offer other languages to the extent possible. For districts which offer other languages in grades seven - eight (2 units), the essential elements shall be those designated as Levels I or II and exploratory languages (½-1 unit) in §75.62 of this title (relating to Other Languages).

§75.43 *Mathematics.*

(a) Mathematics, grade seven (1 unit). Mathematics, grade seven, shall include the following essential elements:

(1) Concepts and skills associated with the understanding of numbers (whole, integer, and rational) and the place-value system. The student shall be provided opportunities to:
(A) investigate the history of numeration systems;

(B) round whole numbers and decimals;
(C) use scientific notation;
(D) factor (primes and composites);
(E) find the least common multiple;
(F) find the greatest common factor;
(G) use fractions, decimals, ratio, and percent;
(H) use integers; and
(I) use exponential notation.

(2) The basic operations on numbers (addition, subtraction, multiplication, division), their properties, and their uses. The student shall be provided opportunities to:
(A) add, subtract, multiply, and divide rational numbers; and
(B) use exponents.

(3) Experience in solving problems by selecting and matching strategies to given situations. The student shall be provided opportunities to:
(A) estimate solutions;
(B) solve simple linear equations and inequalities;
(C) use basic operations;
(D) apply geometric concepts;
(E) use denominate numbers in problem solving;
(F) use proportion and percent; and
(G) practice skills in personal finance.

(4) Measurement concepts and skills using metric and customary units. The student shall be provided opportunities to:
(A) use metric and customary units;
(B) convert within the metric system;
(C) determine perimeter and circumference;
(D) find area, surface area, and volume; and
(E) apply skills.

(5) Properties and relationships of geometric shapes and their applications. The student shall be provided opportunities to:
(A) use points to define lines, rays, angles, and planes;
(B) understand properties and definitions of two- and three-dimensional figures;
(C) use similarity, congruence, and symmetry;
(D) construct geometric figures; and
(E) apply skills.

(6) The representation of numbers on a line and pairs of numbers on a coordinate plane. The student shall be provided opportunities to:
(A) graph on a coordinate plane:
(i) similar figures;
(ii) reflection images; and
(iii) linear equations; and
(B) apply skills.

(7) The use of probability and statistics to collect and interpret data. The student shall be provided opportunities to:
(A) use frequency distributions;
(B) find the mean, median, and mode;
(C) interpret and construct charts and graphs;
(D) use simple event probability; and
(E) apply skills.

(8) Investigating the use of computing devices and their capabilities. The student shall be provided opportunities to use calculators and/or computers to solve mathematics problems.

(b) Mathematics, grade eight (1 unit). Mathematics, grade eight, shall include the following essential elements:

(1) Concepts and skills associated with the understanding of numbers (whole, integer, and rational) and the place-value system. The student shall be provided opportunities to:

(A) use exponential notation;
(B) round whole numbers and decimals;
(C) determine significant digits;
(D) use scientific notation;
(E) factor;
(F) use ratio and percent; and
(G) use integers.

(2) The basic operations on numbers (addition, subtraction, multiplication, division), their properties and their uses. The student shall be provided opportunities to:

(A) demonstrate rational number properties;
(B) add, subtract, multiply, and divide rational numbers; and
(C) find the absolute value.

(3) Experience in solving problems by selecting and matching strategies to given situations. The student shall be provided opportunities to:

(A) estimate solutions;
(B) write and solve equations;
(C) solve problems using denominate numbers;
(D) apply geometric concepts;
(E) apply proportion and percent;
(F) use graphs;
(G) use probability and statistics; and
(H) practice skills in personal finance.

(4) Measurement concepts and skills using metric and customary units. The student shall be provided opportunities to:

(A) use metric and customary units;
(B) convert within the metric system;
(C) recognize precision;
(D) find area, surface area, and volume; and
(E) apply skills.

(5) Properties and relationships of geometric shapes and their applications. The student shall be provided opportunities to:

(A) use right triangle geometry with:
  (i) Pythagorean property;
  (ii) similarity;
  (iii) indirect measurement; and
  (iv) ratios;
(B) apply skills; and
(C) construct geometric figures.

(6) The representation of numbers on a line and pairs of numbers on a coordinate plane. The student shall be provided opportunities to:

(A) graph on a coordinate plane:
  (i) translations and reflections;

(ii) linear equations; and
(iii) nonlinear graphs; and
(B) apply skills.

(7) The use of probability and statistics to collect and interpret data. The student shall be provided opportunities to:
(A) use counting methods and factorials;
(B) draw Venn diagrams;
(C) find the probability of simple and compound events;
(D) use tables and graphs;
(E) find the mean, median and mode;
(F) make predictions; and
(G) apply skills.

(8) Investigating the use of computing devices and their capabilities. The student shall be provided opportunities to:
(A) use calculators and/or computers to solve mathematics problems; and
(B) determine limitations and strengths.

§75.44 *Science.*

(a) Life science (1 unit). Life science shall be a laboratoryoriented course and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:
(A) demonstrate the safe use of microscopes, other biological equipment, and chemicals in life science investigations; and
(B) prepare wet- and dry-mount slides.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to observe selected plants and animals and their growth patterns.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to classify plants and animals according to similarities, differences, and uses.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:
(A) describe the essential life activities carried on by living cells; and
(B) describe ecological relationships in the environment.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:
(A) measure life processes; and
(B) plot data on graphs and other displays.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:
(A) formulate an experimental design to test an hypothesis in life science; and
(B) predict the outcome of life processes.

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to:
(A) compare organism adaptations to environmental changes; and
(B) compare the rates of life processes.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to clarify operational definitions used in explaining life processes.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to identify the variables remaining constant, the variables being manipulated, and the variables responding in a life science investigation.

(10) Application of science in daily life. The student shall be provided opportunities to:

(A) analyze the economic importance of selected plants and animals; and

(B) evaluate the applications and career implications of life science principles and the findings of research.

(11) Health concepts and skills. (A three-week unit of health education including these essential elements shall be taught each semester within this life science course.) The student shall be provided opportunities to:

(A) determine alternate courses of action when one is being pressured concerning use of alcohol, tobacco, marijuana, and other drugs;

(B) investigate the range of effects on personal health and safety from the use of alcohol, tobacco, marijuana, and other drugs;

(C) discriminate between responsible and irresponsible choices that affect personal health;

(D) identify principles of rescue, transfer, and aid to persons choking or not breathing;

(E) investigate the causes, symptoms, prevention, and treatment of communicable and noncommunicable diseases, including sexually transmitted diseases; and

(F) demonstrate basic knowledge of laws and describe governmental regulations related to production, distribution, and use of alcohol, tobacco, marijuana, and other drugs.

(b) Earth science (1 unit). Earth science shall be a laboratoryoriented course and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:

(A) demonstrate the safe use of earth science equipment and chemicals;

(B) prepare display collections of earth materials; and

(C) demonstrate skills using laboratory instruments.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe earth materials and structures, changes in the weather, astronomical objects; and

(B) examine geological, star, and weather maps.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to classify objects or events according to similarities and differences.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) describe renewable and nonrenewable resources;

(B) describe the effects of earth science processes; and

(B) draw a topographic map using points of measured elevation.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) measure earth science properties; and

(B) plot data on graphs, maps, and other displays.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:

(A) predict the outcome of an earth science activity from trends in experimental data using interpolation OR [and] extrapolation; and

(B) formulate an earth science hypothesis from experimental data.

(7) Properties and relationships of objects/events (spatial arrangements, positions, etc.) to other objects and events. The student shall be provided opportunities to:

(A) compare geologic time in relation to life forms and events;

(B) analyze scale models of stratographic structures;

(C) compare and contrast types of weather patterns; and

(D) contrast human activities that affect the natural environment.

(8) The use of defined terms based on experience and observation. The student shall be provided opportunities to clarify operational definitions used to explain earth processes.

(9) Experience in identifying and managing the conditions of investigations. The student shall be provided opportunities to:

(A) identify the variables remaining constant, the variables being manipulated, and the variables responding in an earth science investigation; and

(B) manage an experimental apparatus to test an earth science hypothesis.

(10) Application of science in daily life. The student shall be provided opportunities to evaluate the applications and career implications of earth science principles and the findings of research.

§75.45 *Health.*

(a) Health education, grade seven or eight (½ unit), shall include the following essential elements:

(1) Concepts and skills that foster individual personal health and safety. The student shall be provided opportunities to:

(A) determine alternate courses of action when one is being pressured concerning use of alcohol, tobacco, and other drugs;

(B) describe sources of stress and analyze various ways of handling stress;

(C) recognize that daily health practices affect confidence and achievement, social development, and wellness;

(D) investigate the range of effects on personal health and safety from the use of alcohol, tobacco, and other drugs;

(E) plan a personal program of physical activity, rest, and food selection;

(F) recognize own personal attributes and attitudes;

(G) discriminate between responsible and irresponsible choices that affect personal health;

(H) recognize body systems and their functions; and

(I) identify accident prevention practices needed in our society.

(2) Health-related concepts and skills that involve interaction between individuals. The student shall be provided opportunities to:

(A) practice first aid skills;

(B) identify principles of rescue, transfer, and aid to persons choking or not breathing;

(C) investigate the causes, symptoms, prevention, and treatment of communicable and noncommunicable diseases, including sexually transmitted diseases;

(D) predict effects on health of using products unwisely;

(E) make a plan of action for selecting health services, products, and practitioners;

(F) demonstrate communication skills that foster healthy relationships;

(G) differentiate responsibilities of individuals at various stages of maturity; and

(H) investigate influence of other persons on an individual's attitudes, interests, and needs.

(3) Health-related concepts and skills that affect the well-being of people collectively. The student shall be provided opportunities to:

(A) demonstrate basic knowledge of laws and describe governmental regulations related to production, distribution, and use of alcohol, tobacco, and other drugs;

(B) predict consequences of poor management of public health hazards;

(C) identify uniform traffic controls;

(D) identify local public health agencies' resources; and

(E) identify the roles of individuals, the family, community health departments, and the medical profession in controlling sexually transmitted diseases.

§75.46 *Physical Education.*

Physical education, grades seven and eight (½-2 units), shall include the following essential elements:

(1) Knowledge and motor skills basic to efficient movement. The student shall be provided opportunities to:

(A) safely and efficiently participate in movement skills included in sports, stunts, and other activities; and

(B) improve perceptual motor skills.

(2) Rules, knowledge, and skills basic to beginning or intermediate participation in individual, dual, and team sports. The student shall be provided opportunities to:

(A) participate with other students in individual, dual, and team sports;

(B) develop new and more complex skills needed for success in games and sports; and

(C) practice behavior reflective of good sportsmanship.

(3) Motivation and development of a high level of personal and physical fitness and the ability to maintain this level. The student shall be provided opportunities to:

(A) participate daily in vigorous activities for periods of increasing duration; and

(B) assess level of fitness.

(4) Knowledge and skills for leisure and lifetime sports activities. The student shall be provided opportunities to participate in varied physical recreational activities that could be continued throughout life.

§75.47 *Fine Arts.*

(a) Art, grades seven-eight (½-2 units). (Eight is a continuation and progression of seven.) Art, grades seven-eight, shall include the following essential elements:

(1) Awareness and sensitivity to natural and man-made environments. The student shall be provided opportunities to:

(A) examine a variety of objects;

(B) explore elements (line, value, texture, color, form, and space); and

(C) apply principles (unity, emphasis, balance, variety, movement, and proportion).

(2) Inventive and imaginative expression through art materials and tools. The student shall be provided opportunities to work with design, drawing, painting, printmaking, sculpture, and crafts.

(3) Understanding and appreciation of self and others through art culture and heritage. The student shall be provided opportunities to:

(A) appreciate art (contemporary and of the past); and

(B) see art and artists (visitations and visuals).

(4) Aesthetic growth through visual discrimination and judgment. The student shall be provided opportunities to:

(A) evaluate artwork of students and major artists; and

(B) explore opportunities for applying aesthetic judgments.

(b) General music, grades seven-eight (½-2 units). (General music, grade eight, is a continuation and progression of general music, grade seven.) General music, grades seven-eight, shall include the following essential elements:

(1) Basic music theory. The student shall be provided opportunities to:

(A) know and use the great staff;

(B) know and use pitch and rhythmic notation;

(C) know and use musical symbols and terms;

(D) know and use common key and time signatures;

(E) recognize intervals; and

(F) use dynamics.

(2) Singing techniques. The student shall be provided opportunities to develop and use the singing voice, including basic principles of proper breathing, diction, and tone production.

(3) Study of instruments. The student shall be provided opportunities to:

(A) learn about the history and developments of musical instruments; and

(B) recognize the instruments by sight and sound.

(4) Music history and literature. The student shall be provided opportunities to:

(A) hear and discuss works from all major musical periods, including the music of contemporary life; and

(B) learn about the lives and works of selected composers.

(5) Performance activities. The student shall be provided opportunities to:

(A) participate in individual, small ensemble, or large group performances of vocal or instrumental music; and

(B) practice audience etiquette.

(c) Band, grades seven-eight (½-2 units). The essential elements for band, grades seven-eight, shall be the same as those described for band in §75.67 of this title (relating to Fine Arts).

(d) Orchestra, grades seven-eight (½-2 units). The essential elements for orchestra, grades seven-eight, shall be the same as those described for orchestra in §75.67 of this title (relating to Fine Arts).

(e) Choral music, grades seven-eight (½-2 units). The essential elements for choral music, grades seven-eight, shall be the same as those described for choral music in §75.67 of this title (relating to Fine Arts).

(f) Stage band, grades seven-eight (½-2 units). The essential elements for stage band, grades seven-eight, shall be the same as those described for stage band in §75.67 of this title (relating to Fine Arts).

(g) Instrumental ensembles, grades seven-eight (½-2 units). The essential elements for instrumental ensembles, grades seven-eight, shall be the same as those described for instrumental ensembles in §75.67 of this title (relating to Fine Arts).

(h) Applied music (individual study), grade eight (½-1 unit). The essential elements for applied music (individual study), grade eight, shall be the same as those described for applied music (individual study) in §75.67 of this title (relating to Fine Arts).

(i) Theatre arts, grades seven-eight (½-2 units). (Eight is a continuation and progression of seven.) Theatre arts, grades seven-eight, shall include the following essential elements:

(1) Expressive use of the body and voice. The student shall be provided opportunities to:

(A) develop sensory and emotional awareness;

(B) experiment with imitative and interpretive movement;

(C) use pantomime; and

(D) develop vocal expression.

(2) Acting concepts and skills. The student shall be provided opportunities to:

(A) utilize improvisation;

(B) practice dramatic storytelling;

(C) explore creative dramatization;

(D) develop basic acting techniques; and

(E) experiment with dramatic interpretation.

(3) Theatre production concepts and skills. The student shall be provided opportunities to:

(A) explore puppetry;

(B) explore readers' theatre; and

(C) explore play production.

(4) Aesthetic growth through appreciation of theatrical events. The student shall be provided opportunities to:

(A) develop an appreciation of theatre;

(B) practice audience etiquette;

(C) attend live theatrical events (to be encouraged); and

(D) analyze and evaluate theatrical experiences.

§75.48 *Social Studies, Texas and United States History.*

(a) Social studies attitudes, values, and skills for citizenship. The social studies courses in subsections (b) and (c) of this section shall include the following essential elements as appropriate to the courses:

(1) Respect for self and others. The student shall be provided opportunities to:

(A) respect beliefs of other individuals, groups, and cultures;

(B) be aware that some things are valued more in some groups and cultures than in others;

(C) recognize how societal values affect individual beliefs and attitudes; and

(D) recognize that individuals must accept the consequences of their decisions.

(2) Democratic beliefs and personal responsibility. The student shall be provided opportunities to:

(A) respect the principles that underlie the Texas and the United States Constitutions, the Bill of Rights, and the Declaration of Independence;

(B) consider one's own values as well as those of others when making political decisions;

(C) value open-mindedness, tolerance of differing opinions, and civic participation as important aspects of democratic behavior;

(D) respect the laws of one's society and work responsibly to change laws that one judges to be unjust;

(E) understand the importance of individual participation in civic affairs;

(F) understand that legal rights and protections must be balanced with civic responsibilities;

(G) recognize the value of compromise in the democratic process;

(H) examine reasons that participation and decision making in civic affairs require knowledge, time, and personal efforts;

(I) identify legal rights, responsibilities, and protection afforded juveniles and adults;

(J) support the democratic processes of the republican form of government;

(K) support the basic values of American society (e.g., justice, responsibilities, freedom, respect for the law, diversity, privacy, private property rights, free enterprise, and voluntary exchange); and

(L) support the rules and laws of one's school, community, state, and nation.

(3) Support for the American economic system. The student shall be provided opportunities to:

(A) recognize the contributions of the American economic system to the standard of living of Americans;

(B) support the role of profit in the American market system;

(C) believe in the right of individuals to acquire, use, and dispose of property;

(D) support the freedom of consumers to choose how to spend their income;

(E) recognize that citizens, through legal political activities, can influence economic decisions made by government;

(F) acknowledge the role of government in regulating unreasonable restraint on competition by either producers or consumers;

(G) support competition by either producers or consumers;

(H) support competition as it affects the quantity and quality of goods and services produced;

(I) recognize that as individuals act in their own economic interest they may also serve the economic interest of others; and

(J) compare the control and treatment of public and private property.

(4) Application of social studies skills. The student shall be provided opportunities to:

(A) locate and gather information;

(B) observe for detail;

(C) translate information from one medium to another;

(D) organize and express ideas in written form;

(E) distinguish fact from opinion;

(F) analyze information;

(G) draw conclusions;

(H) synthesize information;

(I) develop criteria for making judgments;

(J) use problem-solving skills;

(K) sequence historical data and information;

(L) draw inferences; and

(M) perceive cause-effect relationships.

(b) Texas history and geography, grade seven (1 unit). Texas history and geography, grade seven, shall include the following essential elements:

(1) Exploration and colonization of Texas. The student shall be provided opportunities to:

(A) describe the history of the earliest inhabitants and settlers of Texas;

(B) understand the reasons for European exploration and colonization of Texas; and

(C) identify and explain significant historical personalities.

(2) Achievement of Texas independence. The student shall be provided opportunities to:

(A) understand reasons for the conflict with Mexico that led to Texas independence;

(B) identify significant individuals in the struggle for Texas independence;

(C) describe major historical events of the Texas Revolution;

(D) understand the significance of the Texas Declaration of Independence, the Alamo, the Battle of San Jacinto, and the Mexican War;

(E) analyze the problems of Texas as a republic; and

(F) summarize the historical developments leading to Texas statehood.

(3) Political and social history of Texas. The student shall be provided opportunities to:

(A) explain the role of Texas in the Civil War;

(B) analyze the effects of the constitution of 1876 on political developments of Texas;

(C) describe the structure and function of government at the local and state levels;

(D) identify significant events in Texas history from post-Reconstruction to present;

(E) identify significant individuals from post-Reconstruction to present;

(F) identify ethnic and racial groups that settled in Texas and reasons for their migration; and

(G) describe the structure and governance of public education.

(4) Geography and economic growth of Texas. The student shall be provided opportunities to:

(A) describe the physical, cultural, and economic features of the Texas landscape;

(B) describe the geographic regions of the state;

(C) understand the influence of geography on the direction and flow of Texas settlement;

(D) locate places of historical significance in Texas;

(E) explain reasons for urbanization of the state; and

(F) describe the role of major industries in the economic development of Texas.

(c) United States history and citizenship (civics), grade eight (early beginning through Reconstruction—1 unit). United States history and citizenship (civics), grade eight, shall include the following essential elements:

(1) United States development as an independent, unified nation. The student shall be provided opportunities to:

(A) recognize the effects of exploration and colonization on the development of the United States;

(B) analyze the political and economic causes of the American Revolution;

(C) describe the major events leading to the independence and establishment of the United States;

(D) describe the causes and effects of the United States' involvement in foreign affairs and international conflicts;

(E) understand the reasons for the rise of sectionalism;

(F) explain the causes of the Civil War;

(G) analyze the effects of the Civil War and Reconstruction on the life of the nation; and

(H) identify significant individuals and their contributions to the United States.

(2) Geographic influences on the historical development of the United States. The student shall be provided opportunities to:

(A) locate and describe major physical features of the United States;

(B) identify and describe the major geographical regions of the United States;

(C) identify the geographical areas that were acquired to form the United States;

(D) locate and explain the importance of selected historical sites and places in the United States;

(E) recognize how physical features of the United States influenced population movements and patterns of settlement;

(F) describe the relationships of physical and climatic features of the United States with those of Canada and Mexico; and

(G) identify the major economic resources of the regions of the United States.

(3) Economic development and growth of the United States. The student shall be provided opportunities to:

(A) explain the effects of the mercantile system on the development of the colonies;

(B) describe the emergence and benefits of the free enterprise economic system in the United States;

(C) understand how geographic patterns of economic resources influenced the development of the United States;

(D) analyze the impact of technological innovations on business, industry, and agriculture;

(E) explain the economic impact of various wars on the United States;

(F) understand the impact of business cycles on the United States;

(G) analyze the relationship of economic sectionalism and the Civil War; and

(H) identify significant American business, industrial, and labor leaders.

(4) Social and cultural developments of the United States. The student shall be provided opportunities to:

(A) analyze the various cultures of the American Indians;

(B) identify ethnic and racial groups that settled in the United States, and explain reasons for immigration;

(C) recognize the contributions of ethnic and racial groups and individuals to the development and growth of the United States;

(D) identify social reform movements, leaders, issues, and results; and

(E) describe developments in art, music, literature, drama, and other culturally related activities.

(5) Political development of the United States. The student shall be provided opportunities to:

(A) identify the political ideas that form the basis for the United States political system;

(B) analyze the main political, economic, and social ideas in the United States Constitution, the Bill of Rights, and the Declaration of Independence;

(C) describe the structure and functions of the three branches of the national government;

(D) explain the system of checks and balances at all levels of government;

(E) identify ways of maintaining a division of power among the local, state, and national governments;

(F) analyze the historical developments of political parties;

(G) describe major political campaigns, elections, issues, and leaders;

(H) interpret the concept that the United States has a "government of law, not men"; and
(I) analyze major historical documents that relate to the development of the United States.

§75.49 *Business Education.*

(a) Typewriting (keyboarding), middle school (½-1 unit). Typewriting (keyboarding), middle school, shall include the essential elements in this subsection. Typewriting offered for one semester must include the elements in paragraphs (1) - (3) of this subsection. Typewriting offered for two semesters must include all of the elements in this subsection.

(1) Keyboard mastery techniques. The student shall be provided opportunities to:
(A) position body and hands;
(B) learn the spatial arrangement of the keyboard;
(C) strike keys with the correct fingers; and
(D) operate various machine parts.

(2) Speed and accuracy in keyboarding. The student shall be provided opportunities to:
(A) read and type response patterns;
(B) type skill-comparison writings;
(C) control the pace of typing for accuracy;
(D) push for higher speed goals; and
(E) sustain speed on longer writings.

(3) Copy-arrangement skills. The student shall be provided opportunities to:
(A) center horizontally and vertically;
(B) tabulate in columns;
(C) balance letters on page;
(D) follow correct form in typing themes; and
(E) apply correction techniques.

(4) Communication skills. The student shall be provided opportunities to:
(A) practice proofreading, spelling, and correcting errors (emphasized in both semesters);
(B) divide words at ends of lines (emphasized in both semesters);
(C) punctuate sentences; and
(D) compose at typewriter.

(5) Problem typing skills. The student shall be provided opportunities to:
(A) follow directions (emphasized in both semesters);
(B) fill in simple forms;
(C) outline and prepare manuscripts; and
(D) type from rough draft.

(6) Electronic information processes. The student shall be provided opportunities to discuss how the ability to operate a keyboard efficiently affects information flow.

(b) Career exploration (½ unit). Career exploration shall include the following essential elements:

(1) Self-awareness in relation to work. The student shall be provided opportunities to:
(A) recognize individual values as determining factors in choosing a career; and
(B) assess individual interests, aptitudes, and limitations and relate them to career goals.

(2) Career options. The student shall be provided opportunities to:
(A) develop a system for collecting career information;
(B) explore careers within US Education Department job clusters, including new and emerging occupations;
(C) relate interests and aptitudes to specific career clusters;
(D) identify manipulative skills essential in many occupations;

(E) conduct a job analysis by interviewing and observing; and
(F) identify common elements in an occupation that may transfer to other fields.

(3) Assessment of career opportunities. The student shall be provided opportunities to:
(A) locate and use information for evaluating employment opportunities; and
(B) determine if career objectives can result in desired long-term financial goals.

(4) Career planning. The student shall be provided opportunities to:
(A) understand the necessity for gaining employability skills;
(B) formulate sequential long-range, tentative career plans;
(C) determine the amount of education or training needed to achieve career goals;
(D) obtain pertinent information about schools and training programs;
(E) select a tentative high school educational plan best suited to needs and desires;
(F) use constructive decision-making skills; and
(G) identify sources of financial assistance for any type of education or experience.

(5) Job seeking. The student shall be provided opportunities to:
(A) locate information about job opportunities for which one is qualified;
(B) identify employment sources;
(C) make job applications; and
(D) interview for a job.

(6) Growing on the job. The student shall be provided opportunities to:
(A) discuss the importance of maintaining and advancing on the job; and
(B) develop interpersonal skills needed in working roles.

(7) Electronic information processes. The student shall be provided opportunities to discuss the use of current electronic methods of accessing database career information as related to course content.

§75.50 *Vocational Education.*

(a) Essential elements common to all programs. The essential elements common to all programs are those described in §75.81 of this title (relating to Essential Elements Common to all Programs).

(b) Exploratory homemaking (½-1 unit). Exploratory homemaking education shall include the following essential elements:

(1) Concepts and skills for successful living with peers, parents, and others. The student shall be provided opportunities to:
(A) identify methods of achieving satisfying relationships with peers, parents, and others;
(B) relate individual needs to personality development; and
(C) identify components of effective communication.

(2) Concepts and skills for achieving optimum personal health and appearance. The student shall be provided opportunities to:
(A) apply principles of good grooming;
(B) identify and apply principles of good nutrition;
(C) relate good health practices to personal habits; and
(D) identify methods for selection and care of clothing.

(3) Basic concepts and skills in caring for the home. The student shall be provided opportunities to:
(A) identify and demonstrate basic skills of caring for the home; and
(B) identify factors influencing housing needs.

(4) Concepts and skills related to successful management of human and nonhuman resources. The student shall be provided opportunities to:
(A) recognize the available human and nonhuman resources; and
(B) identify and apply principles of successful management and conservation of resources.

(5) Concepts and skills in assisting with care of children. The student shall be provided opportunities to:

(A) identify factors affecting the care and guidance of children; and

(B) practice techniques for assisting in safe and productive care of children.

(c) Introductory industrial arts, grades seven-eight, shall include the essential elements in this subsection which shall be common to all programs. Students may take the introductory industrial arts program for one or two years. Students taking the first year of the program or Introductory Industrial Arts I may study six-12 weeks of visual communications technology, six-12 weeks of energy technology, and six-12 weeks of production technology. Students taking the second year of the program or Introductory Industrial Arts II may study 12-24 weeks of construction technology and 12-24 weeks of manufacturing technology.

(1) Concepts and skills in the application of safety procedures. The student shall be provided opportunities to:

(A) demonstrate safe operation and use of selected tools and equipment to avoid injury; and

(B) maintain safe conditions in the laboratory.

(2) Concepts and skills related to planning, designing, and problem solving. The student shall be provided opportunities to:

(A) plan and design industrial products of the student's choice;

(B) measure accurately using metric or customary units;

(C) complete itemized list of materials; and

(D) make working drawings of projects.

(3) Concepts and skills related to the tools, materials, and process of technology. The student shall be provided opportunities to:

(A) solve industrial problems by utilizing a variety of industrial materials;

(B) use correctly selected hand and machine tools; and

(C) select the most suitable process to complete a project.

(4) Concepts and skills related to the past, present, and future of technology. The student shall be provided opportunities to:

(A) recognize ideas and inventions of the past and present; and

(B) relate technological change to the skills needed for the future.

(5) Concepts and skills related to evaluating products and services of technology. The student shall be provided opportunities to:

(A) recognize good design and construction;

(B) evaluate products based on given standards or applications;

(C) service industrial products and equipment; and

(D) develop criteria for selecting, purchasing, and contracting services.

(6) Concepts and skills related to the specific technologies addressed in subsections (d) and (e) of this section.

(d) Introductory Industrial Arts I (grades seven-eight—½-1 unit). Every school offering Introductory Industrial Arts I shall provide the essential elements common to introductory industrial arts and the following essential elements:

(1) Concepts and skills related to visual communications technology. The student shall be provided opportunities to:

(A) make freehand technical drawings;

(B) apply accepted lettering practices and styles;

(C) construct multiview projections with instruments;

(D) describe object size by standard dimensioning practices;

(E) describe objects through pictorial methods;

(F) apply design principles to composition and layout techniques;

(G) operate standard reproduction and duplicating equipment;

(H) use standard finishing techniques;

(I) produce products using accepted methods of image generation;

(J) study the types and uses of visual communications equipment;

(K) use computer software to design and make drawings;

(L) explore the use of function codes in computer numerical control of production machines; and

(M) use data base software to assist in collecting, storing, retrieving, and applying information for industrial applications.

(2) Concepts and skills related to energy technology. The student shall be provided opportunities to:

(A) use apparatus and devices that demonstrate the generation, conversion, and control of mechanical, electrical, and pneumatic-hydraulic power;

(B) construct static or working models or examples of devices that generate, convert, or control energy;

(C) utilize computers for the collection and analysis of data relevant to energy technology;

(D) compare transportation systems that move people and materials by land, sea, air, and space;

(E) plan and implement the controlled movement of robots;

(F) use instrumentation with computers to monitor data-based systems;

(G) compare transmission systems that move energy by electrical, electronic, mechanical, and pneumatic-hydraulic technologies;

(H) construct static or working models that demonstrate devices or systems used to move people and materials;

(I) construct static or working models that demonstrate devices or systems that transmit energy; and

(J) read and interpret maps, charts, and schedules.

(3) Concepts and skills related to production technology. The student shall be provided opportunities to:

(A) apply industrial organization and management systems by planning, organizing, and controlling production processes;

(B) apply primary industrial processes of layout, testing, separating and cutting, drilling and boring, shaping and forming, casting, laminating, coating, decorating, joining, and finishing;

(C) research the recycling of industrial materials;

(D) plan and implement the various steps in the construction process;

(E) research the transformation of raw materials into finished products;

(F) plan and implement mass production activities;

(G) demonstrate techniques and processes used in automated production systems; and

(H) use computers in planning, production, quality control, and management of production systems.

(e) Introductory Industrial Arts II (grade eight—½-1 unit). Every school offering Introductory Industrial Arts II shall provide the essential elements common to introductory industrial arts and the following essential elements:

(1) Concepts and skills related to production technology in the area of manufacturing. The student shall be provided opportunities to:

(A) participate in activities involving product researching, designing, and marketing;

(B) investigate financial resources needed in industrial production;

(C) plan and implement mass production activities:

(D) apply industrial organization and management systems by planning, organizing, and controlling production processes;

(E) develop production charts and graphs;

(F) demonstrate an awareness of automated systems used in manufacturing;

(G) recognize basic material standards and terminology used in industry;

(H) apply the basic industrial processes to manufacturing;

(I) research the recycling of manufacturing materials; and

(J) use computers in planning, production, quality control, and management of production systems.

(2) Concepts and skills related to production technology in the areas of construction. The student shall be provided the opportunities to:

(A) analyze those processes involved in selecting and acquiring a construction site;

(B) design and construct a foundation, floor, wall, ceiling, and roof;

(C) research pre-fabricated systems;

(D) participate in electrical systems installation activities;

(E) practice simple plumbing techniques;

(F) practice trimming and finishing techniques;

(G) explore remodeling procedures;

(H) practice basic masonry techniques;

(I) discuss contracting and subcontracting practices;

(J) develop a basic knowledge of landscaping;

(K) research new construction materials and methods;

(L) explore energy conservation principles involved in construction;

(M) explore techniques and processes used in automated production systems; and

(N) research the recycling of construction materials.

(f) Coordinated Vocational-Academic Education (CVAE)—production, management, and services, (1-2 units). CVAE production, management, and services shall include the essential occupational home economics elements and the concepts and skills related to clothing, apparel, and textiles, food production, management, services, and institutional and home management and supporting services.

(1) Concepts and skills related to clothing, apparel, and textiles management, production, and services. The student shall be provided opportunities to:

(A) achieve quality in simple construction when using domestic and industrial sewing machines;

(B) attain quality in hand sewing through use of appropriate stitches and equipment;

(C) achieve quality in sewing with correct pressing procedure;

(D) achieve quality in sewing through use of appropriate, efficient construction techniques;

(E) exhibit refined work habits when sewing and pressing clothing items;

(F) attain quality in construction by cutting and marking accurately and appropriately;

(G) extend life of garments through simple repairs;

(H) emphasize safety practices in all aspects of clothing and textiles;

(I) achieve product quality through safe, efficient, and controlled industrial sewing methods; and

(J) function effectively and efficiently in routine operations.

(2) Concepts and skills related to food production, managment, and services. The student shall be provided opportunities to:

(A) utilize commercial food service equipment correctly and safely;

(B) utilize high sanitation standards in personal grooming and hygiene;

(C) comply with high standards of sanitation in all phases of food handling;

(D) manifest high safety standards in performance of preparation, service, and cleanup tasks in food service establishments;

(E) assist with receiving, storing, and issuing of foods and supplies;

(F) assist with various phases of meal planning, preparation, and service to ensure customer satisfaction;

(G) achieve quality standards when preparing various appetizers and garnishes and in garnishing foods for service;

(H) attain quality standards in preparing various nonalcoholic beverages;

(I) prepare simple types of hot and cold sandwiches for commercial food service, achieving quality products;

(J) attain quality standards and variety in preparing simple fruit and vegetable dishes for meal service;

(K) produce simple salads and salad dressings;
(L) achieve quality standards in preparing simple types of soups, sauces, and gravies;
(M) prepare simple cereals and macaroni products for commercial food service, adhering to quality standards;
(N) attain quality standards in preparation of eggs and simple egg dishes;
(O) attain quality products when preparing cheeses and simple cheese products;
(P) achieve quality standards in preparing simple types of meats, seafoods, and poultry;
(Q) attain quality standards in preparation of simple quick breads;
(R) attain quality standards in preparing simple types of fruit desserts and fried desserts;
(S) achieve quality standards in preparing simple types of desserts;
(T) produce simple cakes, cookies, and pastries;
(U) demonstrate skills in performance of simple business transactions; and
(V) demonstrate skills in performance of simple catering tasks.

(3) Concepts and skills related to institutional and home management and supporting services. The student shall be provided opportunities to:
(A) understand and demonstrate how to use safety precautions in handling equipment and supplies;
(B) learn the procedure for entering and leaving guest rooms in a hotel or motel;
(C) follow instructions from employer or supervisor concerning methods and sequences to be used when performing simple cleaning tasks;
(D) follow sanitary procedures in performing simple cleaning tasks;
(E) learn to plan for efficient performance of all simple tasks necessary to put rooms in good order;
(F) recognize necessity for sanitation and disinfection in hospital cleaning tasks;
(G) learn the procedures for cleaning occupied rooms and unoccupied rooms;
(H) learn the procedure for entering and leaving the private home;
(I) recognize differences in floors;
(J) learn the appropriate method for cleaning each type of floor;
(K) utilize proper supplies and methods of shampooing carpets;
(L) learn to plan work so that simple cleaning tasks are performed on a regular basis;
(M) recognize times when general cleaning tasks are performed on a regular basis;
(N) recognize times when general cleaning tasks need to be performed;
(O) understand sanitary procedures for laundering machine-washable and hand-washable articles;
(P) learn the functions and appropriate uses for laundry supplies;
(Q) learn the procedures and precautions for operating simple laundry equipment;
(R) apply principles of work simplifications to ironing and pressing;
(S) demonstrate procedures for folding, storing, and handling linens and clothing;
(T) explain the necessity of following linen room procedures;
(U) learn how to select and use appropriate tools and supplies for simple repairs and maintenance tasks; and
(V) use appropriate techniques for simple repair and maintenance tasks.

(g) Occupational investigation (½-1 unit) shall include the following essential elements:
(1) Concepts and skills necessary for self-appraisal. The student shall be provided opportunities to use standardized or informal test data to appraise such factors as personal interests, aptitudes, achievement level, academic potential, life styles, and social/emotional needs.
(2) Concepts and skills related to the occupational clusters. The student shall be provided opportunities to:
(A) identify and analyze the occupational clusters to achieve a broad understanding of the world of work including new and emerging occupations;
(B) concentrate individual study on clusters related to personal interests and aptitudes to develop

skills in utilization of sources of occupational information;

(C) train in decision-making skills to establish a method for continuing occupational decision-making throughout life;

(D) utilize job information to learn about duties, educational requirements, training, salary, and other pertinent job-related factors;

(E) develop employability skills;

(F) develop realistic perceptions of the world of work; and

(G) participate in visits to work sites.

(3) Concepts and skills associated with socioeconomic factors related to occupations. The student shall be provided opportunities to gain an understanding of the economic system to determine attitudes toward work, human interrelationships on the job, and changes in work and life style resulting from changing economic and technological conditions.

(4) Concepts and skills needed for educational planning. The student shall be provided opportunities to:

(A) acquire an awareness of available educational training and resources through visits to high school programs, both academic and vocational, area vocational schools and programs, and post-secondary schools and programs, or by bringing representatives of these schools and programs into the classroom; and

(B) develop a tentative educational plan for high school.

§75.51 *Other Courses.*

Computer literacy (½ unit). Computer literacy shall include the following essential elements:

(1) Computer-related terminology and use. The student shall be provided opportunities to:

(A) identify computer terms;

(B) list uses of computers in a variety of situations;

(C) understand the uses and limitations of computers;

(D) list computer attributes (i.e., speed and accuracy) that make them appropriate tools in a variety of applications;

(E) classify types of computers; and

(F) list advantages and disadvantages of using specific types of computers for various applications.

(2) History and development of computers. The student shall be provided opportunities to:

(A) identify generations of computers; and

(B) investigate the development of various computing devices.

(3) Use of the computer as a tool. The student shall be provided opportunities to:

(A) load software from an external storage medium;

(B) use software packages in a variety of applications (word processing, filing, spread sheets, database manipulation, information retrieval, etc.);

(C) review and evaluate software;

(D) determine which software is most appropriate for various applications;

(E) practice data entry and error checking; and

(F) learn editing procedures in the context of data entry, or other applications.

(4) Communicating instructions to the computer. The student shall be provided opportunities to:

(A) use and develop flowcharts;

(B) develop problem-solving skills;

(C) learn the syntax of a higher level language (i.e., LOGO in elementary school, BASIC or PASCAL in secondary school);

(D) apply the syntax of a language to problem-solving situations;

(E) write reasonably structured programs;

(F) interpret and correct program errors;

(G) find and correct program errors; and

(H) predict output of given programs.

(5) Problems and issues of computer use in the society. The student shall be provided opportunities to:

(A) identify computer-related careers, including training requirements and the impact of automation on the job market;

(B) identify the importance of ethics in accessing and manipulating automated information; and

(C) identify the issues and potential solutions pertaining to, at least, computer-related law, copyright, privacy, and computer crime.

CHAPTER 75 CURRICULUM

SUBCHAPTER D. ESSENTIAL ELEMENTS—GRADES NINE-12

ESSENTIAL ELEMENTS FOR ENGLISH LANGUAGE ARTS; OTHER LANGUAGES; MATHEMATICS; SCIENCE; HEALTH; PHYSICAL EDUCATION; FINE ARTS; SOCIAL STUDIES, TEXAS AND UNITED STATES HISTORY; ECONOMICS WITH EMPHASIS ON THE FREE ENTERPRISE SYSTEM AND ITS BENEFITS; AND BUSINESS EDUCATION

§75.61 *English Language Arts.*

(a) English I (1 unit). English I shall include the following essential elements:

(1) Writing concepts and skills. The student shall be provided opportunities to:

(A) use the composing process to plan and generate writing;

(B) write descriptive, narrative, and expository paragraphs;

(C) write multiple-paragraph compositions incorporating information from sources other than personal experience;

(D) write informative discourse of a variety of types;

(E) write persuasive discourse of a variety of types;

(F) use the forms and conventions of written language appropriately;

(G) evaluate content, organization, topic development, appropriate transition, clarity of language, and appropriate word and sentence choice according to the purpose and audience for which the piece is intended; and

(H) proofread written work for punctuation, spelling, grammatical and syntactical errors, paragraph indentation, margins, and legibility of writing.

(2) Language concepts and skills. The student shall be provided opportunities to:

(A) produce well-formed simple, compound, and complex sentences;

(B) choose appropriate words to convey intended meaning;

(C) use all parts of speech effectively in sentences;

(D) recognize the meanings and uses of colloquialism, slang, idiom, and jargon; and

(E) use oral language effectively in a variety of situations.

(3) Literature concepts and skills. The student shall be provided opportunities to:

(A) recognize the major differences among poems, short stories, plays, and nonfiction;

(B) identify basic sound devices and figurative language;

(C) recognize point of view in literary selections;

(D) recognize cultural attitudes and customs in literary selections; and

(E) use basic literary terminology.

(4) Reading concepts and skills. The student shall be provided opportunities to:

(A) determine word meanings by contextual clues;

(B) use advanced dictionaries for determining word meaning;

(C) expand vocabulary;

(D) identify the stated or implied main idea of a selection;

(E) recognize relevant details;

(F) identify the sequential order of events;

(G) perceive cause and effect relationships;

(H) distinguish between fact and nonfact;

(I) draw conclusions and make inferences;

(J) predict outcomes and future actions;

(K) follow directions involving substeps;
(L) interpret diagrams, graphs, and statistical illustrations;
(M) use format and organization of a book;
(N) use reference materials such as atlas, encyclopedia, almanac, bibliography; and
(O) vary rate of reading according to purpose.

(b) English II (1 unit). English II shall include the following essential elements:
(1) Writing concepts and skills. The student shall be provided opportunities to:
(A) use the composing process to plan and generate writing;
(B) write descriptive, narrative, and expository paragraphs of increasing length and complexity;
(C) write multiple-paragraph compositions incorporating outside information with documentation;
(D) write informative discourse of a variety of types;
(E) write persuasive discourse of a variety of types;
(F) write literary discourse of a variety of types including character sketches, stories;
(G) use a variety of sentence structures including simple, compound, and complex;
(H) use the forms and conventions of written language appropriately;
(I) evaluate content, organization, topic development, appropriate transition, clarity of language, and appropriate word and sentence choice according to the purpose and audience for which the piece is intended; and
(J) proofread written work for punctuation, spelling, grammatical and syntactical errors, paragraph indentation, margins, and legibility of writing.
(2) Language concepts and skills. The student shall be provided opportunities to:
(A) produce well-formed simple, compound, and complex sentences;
(B) choose appropriate words to convey intended meaning;
(C) use all parts of speech effectively in sentences;
(D) use oral language effectively in a variety of situations;
(E) recognize the meanings and appropriate uses of colloquialism, slang, idiom, and jargon;
(F) vary word and sentence choice for purpose and audience; and
(G) produce sentences that convey coordinate and subordinate ideas appropriately.
(3) Literature concepts and skills. The student shall be provided opportunities to:
(A) recognize the major differences among poems, short stories, novels, plays, and nonfiction;
(B) identify basic sound devices and figurative language;
(C) recognize point of view in literary selections;
(D) identify use of basic symbols in literary selections;
(E) recognize the development of an overall theme in a literary work; and
(F) use basic literary terminology.
(4) Reading concepts and skills. The student shall be provided opportunities to:
(A) expand vocabulary;
(B) select main idea of a selection;
(C) recognize relevant details;
(D) arrange events in sequential order;
(E) differentiate between fact and nonfact;
(F) make inferences and draw conclusions;
(G) evaluate and make judgments;
(H) perceive cause and effect relationships;
(I) use selected sections of advanced and special dictionaries;
(J) use reference materials including atlas, encyclopedias, almanac, bibliography;
(K) read complex maps, charts, tables;
(L) use parts of a book including footnotes, appendices, cross references;

(M) follow complex directions; and
(N) adjust reading rate according to purpose.

(c) English III (1 unit). English III shall include the following essential elements:
(1) Writing concepts and skills. The student shall be provided opportunities to:
(A) use the composing process to plan and generate writing;
(B) refine sentences and paragraphs into compositions exhibiting unity, clarity, and coherence;
(C) write longer compositions incorporating outside information with documentation;
(D) write a variety of forms of informative and persuasive discourse;
(E) write at least one form of literary discourse;
(F) make rhetorical choices based on audience, purpose, and form;
(G) use the forms and conventions of written language appropriately;
(H) revise written work for content, organization, topic development, appropriate transition, clarity of language, and appropriate word and sentence choice according to the purpose and audience for which a piece is written;
(I) proofread written work for internal punctuation, spelling, grammatical and syntactical errors, paragraph indentation, margins, and legibility of writing; and
(J) evaluate one's own writing as well as that of others.
(2) Language concepts and skills. The student shall be provided opportunities to:
(A) produce well-formed simple, compound, complex, and compound-complex sentences;
(B) choose appropriate words to convey intended meaning;
(C) analyze the grammatical structure of sentences;
(D) use oral language effectively in a variety of situations;
(E) describe the history and major features of American dialects;
(F) recognize the sociological functions of language; and
(G) demonstrate facility with word analogies and other forms of advanced vocabulary development.
(3) Literature concepts and skills. The student shall be provided opportunities to:
(A) recognize the major authors, periods, forms, and works in American literature;
(B) distinguish between language used denotatively and connotatively in literary selections;
(C) recognize the major types of figurative language and sound devices;
(D) identify irony, tone, mood, allusion, and symbolism in literary selections;
(E) recognize characteristics of literary selections; and
(F) use literary terminology appropriately.
(4) Reading concepts and skills. The student shall be provided opportunities to:
(A) use advanced dictionaries in determining pronunciations and meanings of words;
(B) express main idea in one sentence;
(C) distinguish between fact and opinion, grounded and ungrounded belief, and rational thought and rationalization;
(D) perceive cause and effect relationships;
(E) evaluate the author's point of view;
(F) follow complex directions;
(G) use specialized references independently;
(H) interpret complex maps, charts, and tables;
(I) use parts of a book appropriately; and
(J) adjust reading procedures, techniques, and rate according to the purpose.

(d) English IV (1 unit). English IV shall include the following essential elements:
(1) Writing concepts and skills. The student shall be provided opportunities to:
(A) use the composing process to plan and generate writing;

(B) refine sentences and paragraphs into compositions exhibiting unity, clarity, and coherence;
(C) write longer compositions incorporating outside information with documentation;
(D) write a variety of forms of informative and persuasive discourse;
(E) write at least one form of literary discourse;
(F) use each of the commonly recognized patterns of organization;
(G) achieve precision in meaning through sophisticated language and rhetorical choices;
(H) analyze the presentation of ideas in written discourse, including forms of logical reasoning, common fallacies of reasoning, and techniques of persuasive language;
(I) use the forms and conventions of written language appropriately;
(J) revise written work for content, organization, topic development, appropriate transition, clarity of language, and appropriate word and sentence choice according to the purpose and audience for which a piece is written;
(K) proofread written work for internal punctuation, spelling, grammatical and syntactical errors, paragraph indentation, margins, and legibility of writing; and
(L) evaluate one's own writing as well as that of others.

(2) Language concepts and skills. The student shall be provided opportunities to:
(A) produce well-formed simple, compound, complex, and compound-complex sentences;
(B) exhibit sophisticated and precise word choice to convey meaning;
(C) analyze the grammatical structure of sentences;
(D) use oral language effectively in a variety of situations;
(E) describe the major features of the origins and development of the English language;
(F) recognize the sociological functions of the language; and
(G) demonstrate facility with word analogies and other forms of advanced vocabulary development.

(3) Literature concepts and skills. The student shall be provided opportunities to:
(A) recognize the major authors, periods, forms, and works in British literature;
(B) distinguish between language used denotatively and connotatively in literary selections;
(C) recognize the major types of figurative language and sound devices;
(D) identify irony, tone, mood, allusion, and symbolism in literary selections;
(E) recognize characteristics of various literary genres;
(F) recognize recurring themes in literary selections; and
(G) use literary terminology appropriately.

(4) Reading concepts and skills. The student shall be provided opportunities to:
(A) use advanced and special dictionaries;
(B) identify main idea and supporting details;
(C) determine the author's point of view, purpose, and qualifications;
(D) recognize the devices of propaganda;
(E) perceive cause and effect relationships;
(F) predict probable future outcomes;
(G) use various reference materials;
(H) make generalizations from a given series of assumptions; and
(I) adjust rate and purpose for type of reading.

(e) English IV academic (composition—½ unit). English IV academic (composition) shall include the following essential elements:

(1) Writing concepts and skills. The student shall be provided opportunities to:
(A) employ the various stages of the composing process including prewriting, writing, revision;
(B) refine sentences and paragraphs into compositions exhibiting unity, clarity, and coherence;
(C) analyze the presentation of ideas in written discourse, including forms of logical reasoning, common fallacies of reasoning, and techniques of persuasive language;

(D) write longer compositions incorporating outside information with documentation;

(E) write a variety of forms of informative discourse, including explications of literary works, essays, and reports;

(F) make rhetorical choices based on audience, purpose, and form;

(G) make language choices to convey tone and mood, as well as ideas;

(H) use the forms and conventions of written language appropriately;

(I) use the various forms of discourse such as description, narration, evaluation, and classification as a means of organizing ideas;

(J) demonstrate the ability to use in composition each of the commonly recognized patterns of organization such as chronological order, spatial order, order of importance, supporting generalizations with facts, illustration by example, definition, classification, comparison and contrast, cause and effect, and analysis;

(K) revise written work for content, organization, topic development, appropriate transition, clarity of language, and appropriate word and sentence choice according to the purpose and audience for which a piece is written;

(L) proofread written work for internal punctuation, spelling, grammatical and syntactical errors, paragraph indentation, margins, and legibility of writing; and

(M) evaluate one's own writing as well as that of others.

(2) Language concepts and skills. The student shall be provided opportunities to:

(A) produce well-formed simple, complex, compound, and compound-complex sentences;

(B) exhibit sophisticated and precise word choice to convey meaning;

(C) analyze the grammatical structure of sentences;

(D) use oral language effectively in a variety of situations; and

(E) describe the major features of the origins and development of the English language.

(f) English IV academic (British literature—½ unit). English IV academic (British literature) shall include the following essential elements:

(1) Cultrual background and literary development of British literature. The student shall be provided opportunities to:

(A) understand the cultural attitudes and customs of a variety of groups as reflected in British literature;

(B) recognize the oral and written traditions unique to British literature;

(C) demonstrate an understanding of the past as presented through works written during a particular period of British literature or works written about that period;

(D) recognize the contributions of various historical groups, national groups, and ages to the development of British literary heritage;

(E) recognize the major authors, periods, forms, and works in British literary development; and

(F) understand the characteristics of major types of British folk literature, including tales, fables, parables, and legends of different ethnic groups.

(2) General literary skills. The student shall be provided opportunities to:

(A) distinguish between language used denotatively and connotatively in literary selections;

(B) respond to the major types of figurative language such as simile, metaphor, personification, and hyperbole;

(C) recognize that figurative language, symbols, and images are part of the meaning of a literary work;

(D) understand character roles and analyze subtle emotional reactions and motives of characters;

(E) recognize the relationship between sound devices and meaning in a literary selection;

(F) recognize the use of allusion to widely known characters, situations, or events from significant writers and literary works;

(G) recognize the characteristics and uses of different types of narrators in literary works; and

(H) describe with appropriate terminology major features of a literary work and their relationships such as character, plot, setting, theme, point of view, imagery, style, tone, and mood.

(3) Analysis, classification, and evaluation. The student shall be provided opportunities to:

(A) describe the characteristics of a particular author's style, through such features as the writer's use of language, sentence structure, and description;

(B) recognize that style depends on a writer's purpose, the literary period, and the intended audience;

(C) classify literary works by genres including recognition of similarities in literary structure among genres; and

(D) evaluate a literary work using both commonly accepted criteria and personally developed criteria.

(g) Correlated language arts I (1 unit). Correlated language arts I shall include the following essential elements:

(1) Writing concepts and skills. The student shall be provided opportunities to:

(A) organize ideas in writing;

(B) respond appropriately to purpose and audience in a given writing situation;

(C) use appropriate punctuation, capitalization, and spelling;

(D) edit for clarity of language, appropriate word choice, and effective sentences; and

(E) complete commonly used forms.

(2) Language concepts and skills. The student shall be provided opportunities to:

(A) control sentence structure and avoid fragments and run-ons; and

(B) employ appropriate forms of standard English usage.

(3) Literature concepts and skills. The student shall be provided opportunities to:

(A) discuss a variety of literary selections;

(B) relate to literature by comparing incidents from literature with personal experience; and

(C) use literary models of writing to discuss basic language principles.

(4) Reading concepts and skills. The student shall be provided opportunities to:

(A) identify the directly stated or implied main idea;

(B) recall specific facts and details;

(C) arrange a list of events in sequence;

(D) perceive cause and effect relationships;

(E) make inferences and draw logical conclusions;

(F) arrive at a generalization from a given series of details or assumptions;

(G) evaluate and make judgments on the basis of information given;

(H) distinguish between fact and nonfact, including persuasive devices;

(I) choose the appropriate meaning of multimeaning words;

(J) follow written directions involving subordinate steps;

(K) use various parts of a book as aids in locating information; and

(L) use various sources as aids in locating information.

(h) Correlated language arts II (1 unit). Correlated language arts II shall include the following essential elements:

(1) Writing concepts and skills. The student shall be provided opportunities to:

(A) use the composing process to plan and organize ideas in writing;

(B) write for a variety of purposes and audiences;

(C) use various composition models as aids in developing writing skills;

(D) use formal and informal language appropriately; and

(E) edit for clarity of language, appropriate word choice, and effective sentences.

(2) Language concepts and skills. The student shall be provided opportunities to:

(A) use aural and visual stimuli as springboards for speaking and writing;

(B) control sentence structure and avoid fragments and run-ons;
(C) employ appropriate forms of standard English usage;
(D) use common affixes to change words from one part of speech to another; and
(E) use literary models of writing to discuss sentence building and word choice.

(3) Literature concepts and skills. The student shall be provided opportunities to:
(A) recognize the major differences among poems, short stories, and plays;
(B) discuss figurative language; and
(C) recognize point of view in a literary selection.

(4) Reading concepts and skills. The student shall be provided opportunities to:
(A) identify implied main idea;
(B) recall supporting facts and details;
(C) arrange events in sequential order;
(D) perceive cause and effect relationships;
(E) make inferences and draw conclusions;
(F) summarize and make generalizations;
(G) analyze information and form judgments;
(H) follow complex written directions;
(I) use various parts of a book and various books to locate information;
(J) interpret graphs, diagrams, and charts; and
(K) recognize vocabularies associated with a variety of occupations, special interests, and hobbies.

(i) Correlated language arts III (1 unit). Correlated language arts III shall include the following essential elements:

(1) Writing concepts and skills. The student shall be provided opportunities to:
(A) use the composing process to plan and generate writing;
(B) write for a variety of audiences and purposes;
(C) use the forms and conventions of written language appropriately;
(D) use formal and informal language appropriately; and
(E) edit for clarity of language, appropriate word choice, and effective sentences.

(2) Language concepts and skills. The student shall be provided opportunities to:
(A) control sentence structure; avoid fragments and run-ons;
(B) recognize the forms of all parts of speech and the functions they perform in sentences;
(C) recognize the meanings and uses of colloquialism, slang, idiom, and jargon; and
(D) produce well-formed simple, compound, and complex sentences.

(3) Literature concepts and skills. The student shall be provided opportunities to:
(A) identify sound devices and figurative language;
(B) recognize cultural attitudes and customs in literary selections;
(C) recognize the development of an overall theme in a literary work; and
(D) use basic literary terminology.

(4) Reading concepts and skills. The student shall be provided opportunities to:
(A) identify and evaluate main idea statements;
(B) note supporting facts and details;
(C) arrange events in sequential or simultaneous order;
(D) perceive cause and effect relationships;
(E) analyze a selection, draw conclusions, and make generalizations;
(F) follow complex written directions;
(G) locate information using various parts of a book, various sources, and graphic data;
(H) understand terms and abbreviations used in application forms and payroll deduction statements; and
(I) understand specialized vocabularies.

(j) Correlated language arts IV (1 unit). Correlated language arts IV shall include the following essential elements:

(1) Writing concepts and skills. The student shall be provided opportunities to:

(A) use the composing process to plan and generate writing;

(B) write for a variety of audiences and purposes;

(C) use the forms and conventions of written language appropriately;

(D) use formal and informal language appropriately; and

(E) edit for clarity of language, appropriate word choice, and effective sentences.

(2) Language concepts and skills. The student shall be provided opportunities to:

(A) use oral language in a variety of situations;

(B) exhibit precise word choice to convey meaning;

(C) recognize the meaning and uses of colloquialism, slang, idiom, and jargon; and

(D) produce well-formed simple, compound, complex, and compound-complex sentences.

(3) Literature concepts and skills. The student shall be provided opportunities to:

(A) recognize authors and periods from a variety of world literature;

(B) recognize the major types of figurative language and sound devices;

(C) recognize characteristics of various literary genres; and

(D) use the literary terminology appropriately.

(4) Reading concepts and skills. The student shall be provided opportunities to:

(A) use knowledge of contextual and expectancy clues in word recognition;

(B) use advanced and special dictionaries in determining pronunciations and meanings;

(C) identify main idea and supporting details;

(D) distinguish between fact and nonfact;

(E) perceive cause and effect relationships;

(F) evaluate and make judgments on the basis of information given;

(G) follow complex directions involving subordinate steps;

(H) interpret complex maps, charts, tables, and schedules;

(I) use standard reference materials such as atlas, encyclopedia, almanac, and bibliography;

(J) use parts of a book such as prefaces, footnotes, cross references, appendices; and

(K) adjust reading rate to purpose.

(k) English for speakers of other languages I, II, III (½-1 unit). English for speakers of other languages I, II, IiI shall include the following essential elements:

(1) Listening concepts and skills. The student shall be provided opportunities to:

(A) distinguish between various English speech sounds including:

(i) simple consonant and vowel sounds;

(ii) minimal pairs; and

(iii) language interference difficulties;

(B) listen attentively to spoken English in words, phrases, idiomatic expressions, and complete sentences:

(i) using structured exercises;

(ii) hearing simple stories and dialogue;

(iii) following directions;

(iv) identifying speaker's main idea; and

(v) selecting information from an oral presentation;

(C) analyze speaker's semantic intention in statements, questions, exclamations, and commands;

(D) learn vocabulary for subject areas including:

(i) content-area vocabulary in context; and

(ii) cognates and other terms that express concepts already learned through the first language; and

(E) perceive nonverbal components of messages including:
(i) nonverbal language in general;
(ii) nonverbal language specific to English-speaking culture; and
(iii) socially acceptable or unacceptable nonverbal language.

(2) Speaking concepts and skills. The student shall be provided opportunities to:
(A) successfully give oral directions including:
(i) simple one-activity directions;
(ii) series of simple directions;
(iii) more detailed one-activity directions; and
(iv) series of more detailed directions;
(B) develop oral vocabulary including:
(i) English terminology for expression concepts already learned through the first language;
(ii) new vocabulary in context;
(iii) new vocabulary in normal speech patterns; and
(iv) content versus function words;
(C) speak formally or informally in the appropriate situation;
(D) repeat oral messages, conveying the main idea accurately;
(E) enunciate clearly English sounds in a variety of positions and combinations and in context;
(F) express thoughts accurately using:
(i) precise vocabulary;
(ii) economy of expression;
(iii) idiomatic and slang expressions;
(iv) complex sentence patterns; and
(v) sequencing of messages; and
(G) speak English fluently including:
(i) self-confidence;
(ii) proper tempo, stress, and intonation; and
(iii) variety in sentence length and syntactical structure.

(3) Reading concepts and skills. The student shall be provided opportunities to:
(A) distinguish between letter sounds and shapes;
(B) track visually from left to right and top to bottom of a written page;
(C) identify basic sight words;
(D) demonstrate basic word-attack skills such as structural analysis and contextual clues;
(E) sequence events in a selection;
(F) predict future actions and outcomes;
(G) identify main idea;
(H) draw conclusions;
(I) recall details;
(J) understand graphic material such as maps, globes, charts, and road signs;
(K) follow written directions;
(L) summarize orally in the first language and in English;
(M) respond to nonverbal stimuli such as traffic signals and stop lights;
(N) recognize and use parts of a book; and
(O) use reference materials such as dictionaries, encyclopedias, directories, catalogs, periodicals, newspapers.

(4) Writing concepts and skills. The student shall be provided opportunities to:
(A) use the Roman alphabet;
(B) use standard spelling, punctuation, and capitalization;
(C) use the composing process to plan and generate writing;

(D) write for a variety of purposes and audiences; and
(E) proofread for clarity of language, appropriate vocabulary, and usage.

(l) Reading improvement (½-1 unit). Reading improvement shall include the following essential elements:
(1) Word attack skills to decode written language. The student shall be provided opportunities to:
(A) use structural analysis;
(B) use contextual clues; and
(C) use dictionaries in determining word pronunciation.
(2) Vocabulary development to understand written materials. The student shall be provided opportunities to use advanced and specialized dictionaries in determining word meaning including word origins and word histories.
(3) Comprehension skills to gain meaning from whatever is read. The student shall be provided opportunities to:
(A) identify main idea and supporting details;
(B) sequence events;
(C) perceive cause and effect relationships;
(D) evaluate and make critical analysis of information given;
(E) infer and draw logical conclusions;
(F) make generalizations; and
(G) predict future events and outcomes.
(4) Reading skills applied to a variety of practical situations. The student shall be provided opportunities to:
(A) follow written directions involving subordinate steps;
(B) use parts of a book;
(C) use various kinds of books as aids such as catalogs, telephone books, and encyclopedias;
(D) use graphic sources such as tables, charts, graphs, maps, and diagrams; and
(E) use standard reference books.

(m) Advanced reading (½ unit). Advanced reading shall include the following essential elements:
(1) Vocabulary development to understand written materials. The student shall be provided opportunities to:
(A) expand vocabulary;
(B) use advanced and specialized dictionaries as descriptive rather than prescriptive references; and
(C) understand word origins and word histories.
(2) Comprehension skills to gain meaning from whatever is read. The student shall be provided opportunities to:
(A) infer main ideas;
(B) recognize purpose of illustrations and examples;
(C) infer writer's purpose and point of view;
(D) recognize deductive and inductive reasoning;
(E) evaluate the integrity of the publisher and the effect of publication date on accuracy of content;
(F) classify devices of persuasion;
(G) judge logical validity;
(H) understand character roles such as emotional reaction and motive;
(I) predict probable future outcomes;
(J) test hypotheses;
(K) sense writer's use of humor and pathos, mood, and tone;
(L) compare various viewpoints on same topic; and
(M) elaborate on ideas presented.

(3) Reading skills applied to a variety of practical situations. The student shall be provided opportunities to:

(A) use library skills:

(i) encyclopedia:

(I) index volume;

(II) guide letters;

(III) topical headings;

(IV) index;

(V) cross references; and

(VI) bibliographies;

(ii) vertical files:

(I) complex maps and charts. and

(II) complex graphs and timelines;

(iii) card catalog:

(I) cross reference cards; and

(II) author, title, and subject cards;

(iv) other reference materials:

(I) atlas;

(II) world almanac;

(III) subject index to literature; and

(IV) reader's guide;

(v) audiovisual materials:

(I) card catalog; and

(II) equipment;

(B) organize information; and

(C) adjust rate and purpose to type of reading.

(n) Research/technical writing (½ unit). Research/technical writing shall include the following essential elements:

(1) Gathering information. The student shall be provided opportunities to:

(A) use primary and secondary sources;

(B) take notes;

(C) interpret empirical data; and

(D) organize material.

(2) Putting information into written form. The student shall be provided opportunities to:

(A) use manuscript form;

(B) use outlines;

(C) use footnotes;

(D) use bibliographies;

(E) use quotations;

(F) write research papers; and

(G) write technical reports.

(o) Creative/imaginative writing (½ unit). Creative/imaginative writing shall include the following essential elements:

(1) Principles of creative writing. The student shall be provided opportunities to:

(A) use figurative language;

(B) use literary devices;

(C) incorporate structure into a piece of writing;

(D) use proportion;
(E) use contrast;
(F) use suspense;
(G) use repetition for emphasis;
(H) write from various points of view; and
(I) analyze literary examples.

(2) Producing original work. The student shall be provided opportunities to:
(A) apply sensory observation;
(B) use concrete imagery;
(C) use journals as sources of material; and
(D) produce original work in one or more genres.

(p) Practical writing skills (½ unit). Practical writing skills shall include the following essential elements:

(1) Writing for practical situations. The student shall be provided opportunities to:
(A) compose business letters;
(B) compose inquiries and requests;
(C) write letters of application;
(D) complete application forms;
(E) complete order forms; and
(F) take notes.

(2) Effective written language for practical situations. The student shall be provided opportunities to:
(A) use correct spelling;
(B) develop and use appropriate vocabulary;
(C) use appropriate punctuation;
(D) write grammatically correct sentences;
(E) use paragraphs effectively; and
(F) write legibly.

(q) World literature (½ unit). World literature shall include the following essential elements:

(1) Reading and analyzing selected writing from world literature. The student shall be provided opportunities to:
(A) identify major literary movements;
(B) read works of significant writers;
(C) explore common themes;
(D) explore distinctive features of particular literary traditions;
(E) recognize allusions;
(F) recognize figurative language;
(G) recognize symbolism;
(H) evaluate style;
(I) analyze literary selections, both orally and in writing; and
(J) develop and apply criteria for evaluating literary works.

(r) Literary genres (½ unit). Literary genres shall include the following essential elements:

(1) General literary skills. The student shall be provided opportunities to:
(A) distinguish among denotative, connotative, and figurative language;
(B) recognize symbolism;
(C) recognize imagery;
(D) recognize sound devices;
(E) recognize tone;

(F) recognize mood;
(G) recognize irony;
(H) recognize style;
(I) recognize universal themes;
(J) recognize point of view;
(K) recognize allusion; and
(L) develop and apply criteria for evaluation of literary works.

(2) Literary skills related to poetry. The student shall be provided opportunities to:
(A) examine a variety of poetic forms;
(B) recognize literary devices common to poetry;
(C) understand the role of rhyme;
(D) understand the role of meter; and
(E) recognize terminology associated with poetry.

(3) Literary skills related to short stories. The student shall be provided opportunities to:
(A) analyze the structure of the short story;
(B) identify the elements of the short story;
(C) identify the types of narrators;
(D) examine a variety of plot structures;
(E) recognize the history and development of the short story;
(F) identify major characteristics; and
(G) recognize terminology associated with short stories.

(4) Literary skills related to dramatic literature. The student shall be provided opportunities to:
(A) identify the major elements of dramatic form;
(B) recognize dramatic irony;
(C) identify types of drama;
(D) recognize the historical development of drama;
(E) identify major dramatists and periods;
(F) explore the enhancement of a dramatic work by performance; and
(G) recognize terminology associated with drama.

(s) Humanities (½ unit). Humanities shall include the following essential elements:

(1) Understanding, appreciation, and enjoyment of creative achievements. The student shall be provided opportunities to:
(A) describe how personal creativity is expressed within the requirements of an art form;
(B) identify conditions that encourage creativity;
(C) describe the relationship between form and expression;
(D) recognize the major historical and cultural movements as they are reflected in various art forms; and
(E) analyze an art form both orally and in writing.

(2) Commonalities that literature shares with other fine arts. The student shall be provided opportunities to:
(A) identify the structural elements common to imaginative literature and other fine arts;
(B) describe literary responses to political, social, and philosophical movements;
(C) identify elements of literary creativity; and
(D) develop and apply criteria for evaluating literary works and other art forms.

(3) Response to art forms. The student shall be provided opportunities to express a significant personal idea or experience in some art form.

(t) Analysis of visual media (½ unit). Analysis of visual media shall include the following essential elements:

(1) Principles and techniques of the visual media as an artistic and informative medium. The student shall be provided opportunities to:

(A) identify the varied purposes of visual media;

(B) analyze techniques used in visual media;

(C) recognize associated terminology;

(D) develop and use standards for analyzing visual media;

(E) recognize origin and development of visual media;

(F) compare with other art forms;

(G) explore the emotional and intellectual effects of visual media on viewers;

(H) analyze the content and values of visual media; and

(I) study the relationship between subject matter and choice of media for presenting that subject matter.

(u) Independent study in English (½-1 unit). Independent study in English shall include activities individually designed for high-achieving students. The student shall be provided opportunities to do one or more of the following:

(1) conduct research;

(2) produce original work in print or in another medium;

(3) develop an advanced skill; and

(4) study in a specific area of interest.

(v) Introduction to speech communication (½-1 unit). Introduction to speech communication shall include the following essential elements:

(1) Communication as process. The student shall be provided opportunities to:

(A) develop awareness of the importance of communication; and

(B) demonstrate an understanding of the elements of the communication process.

(2) Self as communicator. The student shall be provided opportunities to:

(A) analyze and assess the role of self and perception in communication effectiveness; and

(B) recognize ethical and social responsibilities of a communicator.

(3) Communication in interaction. The student shall be provided opportunities to:

(A) use appropriate nonverbal symbols;

(B) recognize and select appropriate oral verbal symbols;

(C) listen; and

(D) give, receive, and evaluate feedback.

(4) Communication in democratic group processes. The student shall be provided opportunities to:

(A) develop awareness of the importance of group process;

(B) analyze the purposes, functions, and roles of members for a variety of kinds of formal and informal groups;

(C) develop skill in conflict diagnosis and management in the group process;

(D) demonstrate competence in a variety of formal group discussion formats; and

(E) demonstrate the use of parliamentary procedure for group effectiveness.

(5) Communication through public address—speech preparation. The student shall be provided opportunities to:

(A) select and limit appropriate topics for public speaking;

(B) choose a general purpose to meet the speaker's intent such as informing, persuading, promoting social cohesion, and entertaining;

(C) use effective research skills to gather information and support data;

(D) organize and outline speeches through use of chronological, spatial, cause-effect, problem-solution, or topical patterns of organization;

(E) utilize logical, ethical, and emotional appeals for support and amplification of ideas; and

(F) compose effective introductions, transitions, and conclusions for the speech.

(6) Communication through public address—speech presentation. The student shall be provided opportunities to:

(A) develop competence in impromptu, extemporaneous, manuscript, and memorized modes of delivery;

(B) utilize effective vocal and nonverbal techniques in speech presentation; and

(C) refine skills of diction, enunciation, pronunciation, articulation, and grammar.

(7) Communication as public address—speech analysis. The student shall be provided opportunities to:

(A) develop skills of speech analysis through a study of written speech models;

(B) acquire and utilize specific criteria for the evaluation of public speeches;

(C) identify and evaluate the speaker's use of logical, ethical, and emotional forms of proof; and

(D) present analytical critiques of speeches in both oral and written forms.

(w) Oral interpretation I, II, III (½-1 unit). Oral interpretation I, II, III shall include the following essential elements:

(1) Definitions of interpretation. The student shall be provided opportunities to:

(A) explore interpretative reading;

(B) communicate with an audience; and

(C) suggest potential of literature.

(2) Literary merit. The student shall be provided opportunities to:

(A) understand universal appeal; and

(B) experience uniqueness of literary works.

(3) Determination of meaning. The student shall be provided opportunities to:

(A) understand the nature of meaning;

(B) develop responses to meaning;

(C) experience the emotional impact; and

(D) perceive individual styles of authors and literary types.

(4) Role of the interpreter. The student shall be provided opportunities to:

(A) present literature based on the author's intent; and

(B) recreate intellectual, emotional, and aesthetic aspects of literary works.

(5) Selection of literature. The student shall be provided opportunities to:

(A) identify the nature of the audience;

(B) examine literary genres; and

(C) appraise personal preferences.

(6) Analysis of literature. The student shall be provided opportunities to:

(A) define the author's purpose or attitude;

(B) recognize the author's structure; and

(C) determine the author's style.

(7) Performance techniques. The student shall be provided opportunities to:

(A) evaluate the audience;

(B) expand vocal potential;

(C) implement the use of the body;

(D) use the manuscript; and

(E) answer the demands of literature relative to period, time, style, and locale.

(8) Adaptation of literature. The student shall be provided opportunities to:

(A) preserve the author's intent;

(B) maintain literary form and style;

(C) reach the specific need of the situation; and

(D) provide proper introduction and meaningful transitions suitable to the literature.

(9) Performance of literature. The student shall be provided opportunities to:

(A) present and recreate the literature in individual presentations; and

(B) present and recreate the literature in group performances.

(10) Criteria for evaluation. The student shall be provided opportunities to:

(A) select criteria for appraising individual technique; and

(B) design guidelines for audience reaction.

(x) Introduction to radio and television (½ unit). Introduction to radio and television shall include the following essential elements:

(1) History of the broadcast media. The student shall be provided opportunities to analyze the facts about and evaluate the significance of:

(A) changing patterns of radio programming;

(B) radio broadcasting and its functions today; and

(C) television's emergence and pervasiveness.

(2) Functions of broadcast media. The student shall be provided opportunities to distinguish among the four functions of broadcasting and how they differ on commercial, public, and community access stations:

(A) entertainment;

(B) information;

(C) education; and

(D) advertising/persuasion.

(3) Laws and ethical considerations affecting broadcast media. The student shall be provided opportunities to recognize reasons for and laws concerning:

(A) federal regulation of the broadcast industry;

(B) censorship and freedom of speech;

(C) political campaigning and media; and

(D) determination and dissemination of news.

(4) Impact of radio and television on society. The student shall be provided opportunities to evaluate:

(A) influence on the individual;

(B) impact on a democratic society;

(C) cultural unification; and

(D) immediacy of communication.

(5) Production of radio and television programs. The student shall be provided opportunities to learn about:

(A) economics of broadcasting;

(B) station personnel and management;

(C) selection of subject matter and talent;

(D) application of radio and television programming for use by other curriculum areas; and

(E) technical aspects of production.

(6) Radio and television script composition. The student shall be provided opportunities to learn and refine through writing:

(A) organization and clarity of ideas;

(B) effective use of language;

(C) adaptation of content to specific audience;

(D) creativity and style; and

(E) adherence to timeframe.

(7) Production techniques. The student shall be provided opportunities to learn and practice:

(A) vocal techniques used in broadcast;

(B) performance techniques to achieve camera presence; and

(C) functions and responsibilities of production team members.

(8) Role of the broadcast media consumer. The student shall be provided opportunities to recognize and respond to:

(A) fact and opinion in newscasts, commercials, and documentaries;

(B) critical appreciation of quality programming; and

(C) advertising strategies.

(9) Careers and continued study in broadcasting. The student shall be provided opportunities to provide encouragement for and familiarization with:

(A) the varied spectrum of broadcast career opportunities;

(B) career competencies needed for entry level into the field; and

(C) higher level and post-secondary study of broadcasting.

(10) Evaluation and assessment. The student shall be provided opportunities to establish criteria for:

(A) the promotion of high standards in the writing, producing, directing, and performance of broadcast presentation;

(B) the measurement of learning skills; and

(C) the evaluation of production projects.

(v) Debate I, II, III (½-1 unit). Debate I, II, III shall provide a program that includes the following essential elements:

(1) Specific formats and forums for debate. The student shall be provided opportunities to examine the structure of:

(A) debate in a democratic society;

(B) congress/legislative debate;

(C) Lincoln/Douglas debate;

(D) standard debate; and

(E) Oregon debate (cross examination).

(2) Processes of logic and critical thinking. The student shall be provided opportunities to analyze reasoning forms and approaches.

(3) Reading experiences. The student shall be provided opportunities to:

(A) examine diverse sources; and

(B) increase close reading skills through research and preparation of material.

(4) Written single-issue briefs. The student shall be provided opportunities to brief affirmative or negative arguments in outline form.

(5) Resolution interpretation. The student shall be provided opportunities to explore the resolution through definitions, potential issues, use of "should," and unique requirements of value and fact topics.

(6) Affirmative case construction. The student shall be provided opportunities to develop a prima facie case with attention to fiat powers, organizational approach, plan components, solvency proofs, burden of proofs, inherent obligations, and topical correctness.

(7) Negative case construction. The student shall be provided opportunities to clarify stock issues, defense of status quo, counter plans, presumption, direct refutation, minor repairs, extra-topicality, and uniqueness.

(8) Listening to cross-examination as witness, questioner, or auditor. The student shall be provided opportunities to refine spontaneous response through:

(A) questioning techniques;

(B) listening accuracy;

(C) witness obligations; and

(D) carry-through in argumentation.

(9) Oral, aural, and written evaluation of arguments. The student shall be provided opportunities to refute individual arguments within debate format(s) through extensions of arguments, flowing of arguments, and clashing with case.

(10) Presentation of debate. The student shall be provided opportunities to test the accrued abilities or reading, writing, listening, speaking, and analyzing through competitive tournament debating.

(z) Public speaking I, II, III (½-1 unit). Public speaking I, II, III shall provide a program that includes the following essential elements:

(1) Concepts of rhetoric. The student shall be provided opportunities to:

(A) become acquainted with the concepts of classical rhetoric;

(B) become acquainted with the concepts of Aristotelian modes and proof; and

(C) analyze methods used by speakers and writers in dealing with these concepts.

(2) Outstanding public speakers of the past and present. The student shall be provided opportunities to:

(A) assess elements of style, technique, and development; and

(B) analyze various types of appeal such as to logic, to emotion, and to audience values.

(3) Topic selection. The student shall be provided opportunities to:

(A) become acquainted with the process and criteria for selecting ideas for public communication such as choosing the subject, discovering ideas within the subject, shaping ideas to suit the audience, purpose, and occasion; and

(B) analyze scope of topic and possible methods for development.

(4) Library and non-library research skills. The student shall be provided opportunities to:

(A) become acquainted with a variety of research sources ranging from standard reference volumes to interviews;

(B) evaluate research as to quality and application; and

(C) develop methods of notetaking and filing for the purpose of preserving and retrieving research information.

(5) Organization of ideas. The student shall be provided opportunities to:

(A) formulate an effective introduction for various speeches;

(B) formulate an effective conclusion for various speeches;

(C) choose the appropriate internal pattern for various speeches;

(D) utilize relevant, varied, and interesting forms of proof to support the ideas of various speeches; and

(E) formulate effective transitional devices by which to progress smoothly and logically from one idea to another in various speeches.

(6) Selection of language. The student shall be provided opportunities to:

(A) recognize and use various rhetorical devices such as repetition, analogy, antithesis, parallelism, and figurative language;

(B) recognize the elements of verbal style such as concreteness, clarity, appropriateness, and economy; and

(C) recognize and use defensive/nondefensive-producing language and various motive appeals.

(7) Preparation and presentation. The student shall be provided opportunities to:

(A) distinguish among manuscript, extemporaneous, and impromptu speeches; and

(B) recognize the purpose of and practice the presentation of various types of speeches.

(8) Delivery skills. The student shall be provided opportunities to:

(A) distinguish between verbal and nonverbal skills; and

(B) recognize and use diction, voice control, posture and gesture, eye contact, and confidence.

(9) Listening skills. The student shall be provided opportunities to:

(A) become acquainted with the differences between hearing and listening;

(B) become acquainted with the barriers to effective listening; and

(C) improve listening skills through listening to and evaluating a variety of speeches.

(10) Evaluation skills. The student shall be provided opportunities to establish criteria for the analysis and evaluation of public address.

(-a-) Independent study/speech (½-1 unit). Independent study/speech shall include the following essential elements:

(1) Activities individually designed for high-achieving students. The student shall be provided opportunities to do one or more of the following:

(A) conduct research;

(B) produce original work in print or in some other medium;

(C) develop an advanced skill; and

(D) study extensively in a specific area of interest.

(-b-) Journalism (½-1 unit). Journalism shall include the following essential elements:

(1) History of mass print media in the United States. The student shall be provided opportunities to identify significant persons and events in journalism in the United States.

(2) Contemporary role of mass print media in the United States. The student shall be provided opportunities to:

(A) define the responsibility of media to the audience;

(B) distinguish fact from opinion;

(C) identify types of print media;

(D) distinguish between print and broadcast material; and

(E) analyze economic costs in maintaining diversity.

(3) Basic features of journalism. The student shall be provided opportunities to:

(A) analyze editorial policies;

(B) identify types of audiences;

(C) develop guidelines for news value of stories;

(D) explain significance of placement; and

(E) compose headlines including size and word connotations.

(4) Journalistic writing. The student shall be provided opportunities to:

(A) differentiate among and write straight, interpretive, and feature news stories, including effective leads;

(B) understand the elements of news;

(C) use inverted pyramid form;

(D) write effective headlines and cutlines;

(E) use journalistic style;

(F) gather information through interviews and incorporate direct and indirect quotations; and

(G) edit copy using appropriate copyreading and proofreading symbols.

(5) Purposes and characteristics of newspaper pages. The student shall be provided opportunities to describe the characteristics of editorial pages, front pages, and sports pages and distinguish among them.

(6) Current trends in format and publishing techniques. The student shall be provided opportunities to choose formats for editorial, front, and sports pages.

(7) Graphics, design, and layout in newspapers and magazines. The student shall be provided opportunities to:

(A) demonstrate the relationship among the elements of design;

(B) identify sizes and types of print;

(C) select, crop, and scale pictures and photographs;

(D) use the principles of balance, contrast, and variety in layout;

(E) paste up pages; and

(F) prepare press-ready materials.

(8) Printing process. The student shall be provided opportunities to:

(A) choose typographical specifications;

(B) set copy; and

(C) lay out pages.

(9) Survey of advertising. The student shall be provided opportunities to:

(A) study current trends in advertising;

(B) sell advertising; and

(C) design and prepare ads for publication.

(-c-) Advanced journalism: yearbook or literary magazine production I, II, III (½-1 unit). Advanced journalism: yearbook or literary magazine production I, II, III shall include the following essential elements:

(1) Elements and processes of magazine-type journalistic products, including the school yearbook and literary magazine. The student shall be provided opportunities to:

(A) cooperate with other participating persons and organizations in developing a product;

(B) work within time constraints and budget limitations;

(C) develop student financial responsibility in producing and publishing materials;

(D) plan and implement an advertising campaign;

(E) plan and implement a circulation campaign;

(F) cut and crop photographs to fit an overall page plan;

(G) write and edit copy;

(H) produce effective graphic art;

(I) write effective headlines and cutlines; and

(J) edit and proofread copy, pages, and entire issues.

(-d-) Advanced journalism: newspaper production I, II, III (½-1 unit). Advanced journalism: newspaper production I, II, III shall include the following essential elements:

(1) Elements and processes used in producing a school newspaper. The student shall be provided opportunities to:

(A) cooperate with other participating persons and organizations in developing a product;

(B) work within time constraints and budget limitations;

(C) develop student financial responsibility in producing and publishing materials;

(D) plan and implement an advertising campaign;

(E) plan and implement a circulation campaign;

(F) apply skills in covering events and in writing articles that reflect the variety of school and community life;

(G) plan dummies and paste up pages;

(H) select, crop, and scale photographs;

(I) write effective cutlines and headlines; and

(J) edit and proofread copy, pages, and entire issues.

(-e-) Photojournalism (½-1 unit). Photojournalism shall include the following essential elements:

(1) Photography for journalistic purposes. The student shall be provided opportunities to:

(A) plan photographs in relation to assignments from an editor;

(B) illustrate news events with appropriate photos and captions; and

(C) sequence photos.

(2) Camera techniques. The student shall be provided opportunities to operate various types of cameras, light meters, and electronic strobes.

(3) Film processing. The student shall be provided opportunities to:

(A) use the darkroom;

(B) use film processing supplies; and

(C) identify available supplementary services.

(4) Photo composition. The student shall be provided opportunities to:

(A) apply principles of balance and contrast; and
(B) crop and scale photographs.

(-f-) Broadcast journalism (½-1 unit). Broadcast journalism shall include the following essential elements:
(1) Nature of radio and television broadcasting. The student shall be provided opportunities to:
(A) understand radio waves and the radio spectrum; and
(B) understand principles of transmission of signals.
(2) Evolution of radio and television broadcasting. The student shall be provided opportunities to understand the history and significance of:
(A) point-to-point radio;
(B) radio broadcasting;
(C) television broadcasting; and
(D) regulation of broadcasting.
(3) Issues in legal and ethical responsibilities of nonprint media. The student shall be provided opportunities to:
(A) select content for broadcasting;
(B) understand and work within regulatory constraints;
(C) determine and provide for audience needs and wishes; and
(D) identify availability of alternative programming.
(4) Analysis of nonprint media coverage of news. The student shall be provided opportunities to:
(A) distinguish between capabilities of print and nonprint media news coverage;
(B) select coverage;
(C) gather news; and
(D) program.

(-g-) Independent study/journalism (½-1 unit). Independent study/ journalism shall include activities individually designed for high-achieving students. The student shall be provided opportunities to do one or more of the following:
(1) conduct research;
(2) produce original work in print or in some other medium;
(3) extensively develop an advanced skill; and
(4) study in a specific area of interest.

§75.62 *Other Languages.*

(a) Other languages level I (1 unit). Other languages, level I, shall include in a sequential program the following essential elements:
(1) Listening. Skills and concepts that result in the understanding of most routine questions, statements, commands and the gist of everyday conversations on nontechnical subjects. The student shall be provided opportunities to:
(A) discriminate sounds in meaningful contexts;
(B) distinguish variations in sounds and intonation patterns; and
(C) comprehend basic structures, expressions, and common vocabulary.
(2) Speaking. Skills and concepts that result in the ability to respond to most routine questions, statements, and commands, to speak intelligibly and use vocabulary sufficient to express oneself simply, and to discuss situations relevant to everyday life. The student shall be provided opportunities to:
(A) reproduce sounds and intonation patterns in meaningful contexts;
(B) use words, phrases, or sentences as appropriate; and
(C) use expressions needed for daily life situations.

(3) Reading. Skills and concepts that result in the understanding of most routine expressions learned orally and of nontechnical material on familiar subjects with the aid of references. The student shall be provided opportunities to:

(A) read familiar material with comprehension; and

(B) read familiar material orally approximating correct pronunciation and intonation.

(4) Writing. Skills and concepts that result in the production of essential messages and in the communication of everyday situations using basic constructions and simple vocabulary. The student shall be provided opportunities to:

(A) write familiar material using spelling, capitalization, and punctuation conventions; and

(B) write from dictation.

(5) Culture. Concepts that result in knowledge and awareness of the history and culture of another people within a range of situations. The student shall be provided opportunities to:

(A) experience various aspects of another culture; and

(B) understand that behavior is conditioned by culture.

(6) Language. Concepts that result in generalizations about how a language operates and skills that result in the application of the language learning process to the study of other languages. The student shall be provided opportunities to:

(A) recognize the interrelationship of languages;

(B) recognize the role of nonlinguistic elements in communication; and

(C) recognize errors as important in learning a language.

(b) Other languages level II (1 unit). Other languages, level II, shall include in a sequential program the following essential elements:

(1) Listening. Skills and concepts that result in the understanding of most routine questions, statements, commands, and the gist of everyday conversations on nontechnical subjects. The student shall be provided opportunities to:

(A) distinguish variations in sounds and intonation patterns;

(B) comprehend basic structures, expressions, and common vocabulary;

(C) comprehend short familiar passages; and

(D) recognize familiar material in unfamiliar context.

(2) Speaking. Skills and concepts that result in the ability to respond to most routine questions, statements, and commands, to speak intelligibly and use vocabulary sufficient to express oneself simply and to discuss situations relevant to everyday life. The student shall be provided opportunities to:

(A) reproduce sounds and intonation patterns in meaningful contexts;

(B) use words, phrases, or sentences as appropriate;

(C) use expressions needed for daily life situations;

(D) retell familiar material; and

(E) use alternate means of communicating an idea.

(3) Reading. Skills and concepts that result in the understanding of most routine expressions learned orally and of nontechnical material on familiar subjects with the aid of references. The student shall be provided opportunities to:

(A) read familiar material with comprehension;

(B) read familiar material orally approximating correct pronunciation and intonation;

(C) understand familiar material in context; and

(D) use word recognition skills.

(4) Writing. Skills and concepts that result in the production of essential messages and in the communication of everyday situations using basic constructions and simple vocabulary. The student shall be provided opportunities to:

(A) write familiar material using spelling, capitalization, and punctuation conventions;

(B) write from dictation; and

(C) use familiar material in guided composition.

(5) Culture. Concepts that result in knowledge and awareness of the history and culture of another people within a range of situations. The student shall be provided opportunities to:

(A) understand that behavior is conditioned by culture;

(B) become aware of the cultural connotations of common words and phrases; and

(C) locate and organize cultural information.

(6) Language. Concepts that result in generalizations about how a language operates and skills that result in the application of the language learning process to the study of other languages. The student shall be provided opportunities to:

(A) recognize the interrelationship of languages;

(B) recognize that some language features are unique;

(C) recognize errors as important in learning a language; and

(D) develop language learning techniques.

(c) Other languages level III (1 unit). Other languages, level III, shall include in a sequential program the following essential elements:

(1) Listening. Skills and concepts that result in the understanding of most routine questions, statements, commands, and the gist of everyday conversations on nontechnical subjects. The student shall be provided opportunities to:

(A) comprehend basic structures, expressions, and common vocabulary;

(B) comprehend short familiar passages;

(C) recognize familiar material in unfamiliar context;

(D) interpret body language and context to aid comprehension; and

(E) comprehend native speakers in controlled situations.

(2) Speaking. Skills and concepts that result in the ability to respond to most routine questions, statements, and commands, to speak intelligibly and use vocabulary sufficient to express oneself simply and to discuss situations relevant to everyday life. The student shall be provided opportunities to:

(A) reproduce the sounds and intonation patterns in meaningful contexts;

(B) use expressions needed for daily life situations;

(C) retell familiar material;

(D) use alternate means of communicating an idea; and

(E) sustain conversation on familiar subjects.

(3) Reading. Skills and concepts that result in the understanding of most routine expressions learned orally and of nontechnical material on familiar subjects with the aid of references. The student shall be provided opportunities to:

(A) understand unfamiliar material in context;

(B) use word recognition skills; and

(C) do intensive and extensive reading, including ordinary prose and some literary selections.

(4) Writing. Skills and concepts that result in the production of essential messages and in the communication of everyday situations using basic constructions and simple vocabulary. The student shall be provided opportunities to:

(A) use familiar material in guided composition; and

(B) do original composition, including personal letters and the completion of forms and questionnaires.

(5) Culture. Concepts that result in knowledge and awareness of the history and culture of another people within a range of situations. The student shall be provided opportunities to:

(A) understand that behavior is conditioned by culture;

(B) become aware of the cultural connotations of common words and phrases; and

(C) study cultural generalizations.

(6) Language. Concepts that result in generalization about how a language operates and skills that result in the application of the language learning process to the study of other languages. The student shall be provided opportunities to:

(A) recognize appropriate language for different social situations;

(B) recognize language as a system of communication; and

(C) develop language learning techniques.

(d) Advanced languages I, II, III, IV (½-1 unit). Advanced languages I, II, III, IV shall include in a sequential program one or more of the following essential elements:

(1) Oral communication skills (listening and speaking). Skills and concepts that result in satisfying routine social demands and limited school or work requirements; culture is taught as an integral part of oral communication skills. The student shall be provided opportunities to:

(A) understand face-to-face speech in a standard dialect on everyday topics;

(B) follow the essential points of a discussion, speech, or explanation on topics in a special field of interest;

(C) comprehend oral language when encountered in a variety of media including radio, television, cinema, and theatre;

(D) express opinions;

(E) describe particular interests and special fields of choice;

(F) participate in casual conversations about current events, work, family, and autobiographical information; and

(G) expand the use of fundamental grammatical constructions.

(2) Written communication skills (reading and writing). Skills and concepts that result in the ability to read edited textual material or authentic printed material within a familiar context and to write from personal experience social correspondence and compositions on familiar topics; culture is taught as an integral part of written communication skills. The student shall be provided opportunities to:

(A) identify main idea and supporting details;

(B) read news items describing current events;

(C) understand and write social notes and personal and business letters;

(D) read fiction and nonfiction;

(E) read selections of prose and poetry of moderate difficulty with attention given to style;

(F) write cohesive summaries and short narrative descriptions on factual topics;

(G) express personal preferences and observations in some detail;

(H) understand and use the forms and conventions of written language appropriately;

(I) use reference works such as dictionaries, encyclopedias, and atlases; and

(J) expand the use of fundamental grammatical constructions.

(3) Reading. Skills and concepts that result in the ability to read edited textual material or authentic printed material within a familiar context; culture is taught as an integral part of the skill of reading. The student shall be provided opportunities to:

(A) do intensive and extensive reading;

(B) understand ordinary prose which may include such items as personal letters, inscriptions, and technical material; and

(C) read selections of prose and poetry of moderate difficulty with attention given to style.

(e) Exploratory languages (½ unit). Exploratory languages shall include in a nonsequential program one or more of the following essential elements:

(1) Skills and concepts pertaining to the process that is language. The student shall be provided opportunities to:

(A) experience the linguistic skills—listening, speaking, reading, and writing;

(B) experience various aspects of another culture;
(C) analyze and apply grammatical rules;
(D) practice different types of language exercises and activities; and
(E) examine the subsystems of language, e.g., sounds, grammar, vocabulary, etc.

(2) Skills in studying a language. The student shall be provided opportunities to:
(A) develop accuracy in the observation and the application of linguistic rules;
(B) understand that errors are important in learning a language; and
(C) practice different language learning techniques.

(3) Skills in making generalizations about language and culture. The student shall be provided opportunities to:
(A) apply and extend knowledge of one language to another language;
(B) compare and contrast features of another language with English;
(C) recognize the role of nonlinguistic elements in communication; and
(D) understand that behavior is conditioned by culture.

(f) Language for special purposes (½ unit). Language for special purposes shall include in a nonsequential program one or both of the following essential elements:

(1) Skills and concepts related to traveling in another country. The student shall be provided opportunities to:
(A) understand and use words, phrases, and expressions encountered when traveling;
(B) demonstrate facility with the mechanics of travel; and
(C) understand certain customs and practices of the host country.

(2) Skills and concepts related to a career. The student shall be provided opportunities to:
(A) understand and use specialized words and phrases;
(B) perform reading and writing tasks basic to the field of work; and
(C) demonstrate an understanding of customs and practices related to the career studied.

(g) Cultural topics (½-1 unit). Cultural topics shall include in a nonsequential program one or more of the following essential elements:

(1) Historical development of a selected region or country. The student shall be provided opportunities to:
(A) recognize the interaction of the region or country with the rest of the world;
(B) trace historical events from the beginnings to the present; and
(C) identify significant personalities in the development of the region or country.

(2) Geographical aspects of and related influences on a selected region or county. The student shall be provided opportunities to:
(A) understand the influence of geography on the historical development of the region or country; and
(B) explore the interrelationships between the physical and cultural environments.

(3) Cultural aspects of a selected region or country. The student shall be provided opportunities to:
(A) understand the social, cultural, and economic changes that have affected lifestyles;
(B) recognize the variation of cultural patterns within the region or country;
(C) understand the role of religion and tradition in shaping a people's actions; and
(D) explore the art, music, literature, drama, and other culturally related activities of the region or country.

(4) Linguistic aspects of a selected region or country. The student shall be provided opportunities to:
(A) understand, reproduce, read, and write common expressions and vocabulary used in the region or country studied; and
(B) describe general aspects of the language based upon the linguistic experiences provided.

§75.63 *Mathematics.*

(a) Fundamentals of mathematics (1 unit). Fundamentals of mathematics shall include the following essential elements.

(1) Measurement concepts and skills using metric and customary units. The student shall be provided opportunities to:

(A) find appropriate units of measure;

(B) solve problems involving measures; and

(C) apply ratio and proportion.

(2) Properties and relationships of shapes and their applications. The student shall be provided opportunities to:

(A) find and use perimeter, area, circumference, surface area, and volume; and

(B) apply geometric properties.

(3) Concepts and skills associated with the understanding of numbers (whole, integer, and rational) and the place-value system. The student shall be provided opportunities to:

(A) use the operations of addition, subtraction, multiplication, and division with whole numbers and integers in practical situations;

(B) use fractions and their relative values;

(C) use the operations of addition, subtraction, multiplication, and division with fractions in problem situations;

(D) compare decimal fractions; and

(E) use the operations of addition, subtraction, multiplication, and division with decimals in problem situations.

(4) Concepts and skills involving income, cost comparisons, and taxes. The student shall be provided opportunities to:

(A) compute wages;

(B) interpret deductions on paycheck stubs;

(C) apply percents;

(D) make budgets; and

(E) open and maintain checking and savings accounts.

(5) Experience in solving problems by selecting and matching strategies to given situations. The student shall be provided opportunities to:

(A) estimate solutions;

(B) write and solve equations;

(C) measure;

(D) apply geometric concepts;

(E) determine proportion and percent;

(F) use graphs;

(G) use probability and statistics; and

(H) work with personal finance.

(6) The use of probability and statistics to collect and interpret data. The student shall be provided opportunities to:

(A) use counting methods and factorials;

(B) construct charts, graphs, and frequency tables;

(C) find measures of central tendency (mode, median, and mean);

(D) understand simple and compound events;

(E) make predictions; and

(F) apply skills.

(b) Consumer mathematics (1 unit). Consumer mathematics shall include the following essential elements:

(1) Use of concepts and skills in graphing and in statistics to gather information and make decisions. The student shall be provided opportunities to:

(A) interpret charts, tables, graphs, and maps;

(B) construct appropriate graphs from consumer or career-related information;

(C) determine wages and deductions from given information;

(D) use mean, median, and mode;

(E) find validity of claims involving statistical data.

(2) Application of operations and properties of ratio, proportion, and percent to determine costs and to make decisions from cost comparisons. The student shall be provided opportunities to:

(A) find costs of:

(i) housing (owning and renting);

(ii) food;

(iii) transportation;

(iv) clothing; and

(v) insurance;

(B) make decisions by comparing different types of the costs in subparagraph (A) of this paragraph; and

(C) find discounts, sales, rebates coupons, etc.

(3) Use of probability concepts and skills to investigate possibilities of arrangements or occurrences and to make predictions from these probabilities. The student shall be provided opportunities to:

(A) use the fundamental counting principle;

(B) use permutations;

(C) construct tree diagrams; and

(D) use sample spaces to determine probabilities and odds in favor of an event.

(4) Investigation of financing procedures and costs, and comparison of different types of financing. The student shall be provided opportunities to:

(A) investigate the use of credit cards and charge accounts; and

(B) study options of loans for things such as car, home, etc.

(5) Concepts and skills involved in banking and investment procedures. The student shall be provided opportunities to:

(A) use banking forms (deposit slips, checks, checkbook records, and bank statements); and

(B) compare advantages and disadvantages of investments.

(6) Concepts and skills involved in following local, state, and federal tax laws. The student shall be provided opportunities to:

(A) investigate local, state, and federal tax requirements;

(B) find various taxes on specified amounts; and

(C) use tax reporting forms.

(7) Concepts and skills involved in developing a budget. The student shall be provided opportunities to:

(A) use the knowledge of costs and cost comparisons to make plans for managing specific amounts of money; and

(B) develop a personal budget.

(c) Pre-algebra (1 unit). Pre-algebra shall include the following essential elements:

(1) Concepts and skills associated with the understanding of numbers and the place-value system. The student shall be provided opportunities to:

(A) find whole number and decimal place values;

(B) use scientific notation;

(C) find factors and multiples;

(D) understand fraction concepts involving:
(i) least common multiple;
(ii) greatest common factor; and
(E) use integers.

(2) Operations on numbers, their properties, and their uses. The student shall be provided opportunities to:
(A) understand basic operations with and properties of integers, decimals, and fractions;
(B) use the order of operations;
(C) use exponents;
(D) find squares and square roots;
(E) solve simple equations involving integers, decimals, and fractions; and
(F) apply skills.

(3) Experience in solving problems by selecting and matching strategies to given situations. The student shall be provided opportunities to:
(A) evaluate variables and expressions (formulas);
(B) use ratio and proportion;
(C) find percent and percentage; and
(D) determine needs related to personal finance.

(4) Investigation of the properties and relationships of geometric figures using measurement concepts and skills. The student shall be provided opportunities to:
(A) understand the basic elements of geometry (point, line, etc.);
(B) investigate geometric figures and their characteristics;
(C) use metric and customary units;
(D) find distance, perimeter, circumference, area, surface area, and volume;
(E) use indirect measurement with similar triangles; and
(F) investigate right triangle properties.

(5) The use of probability and statistics to collect and interpret data. The student shall be provided opportunities to:
(A) use counting procedures (tree diagrams, and multiplication);
(B) find the probability of independent and dependent events;
(C) gather and record data;
(D) determine the mean, median, and mode;
(E) construct graphs from gathered data; and
(F) interpret graphs and analyze data.

(6) Concepts and skills involved in the analysis and graphing of relations and functions. The student shall be provided opportunities to:
(A) graph solution sets of equations and inequalities on a line;
(B) use ordered pairs and coordinate graphing;
(C) simplify polynomials;
(D) investigate linear equations and inequalities and their graphs;
(E) apply direct and inverse variation;
(F) find slope and intercepts;
(G) solve systems of equations; and
(H) apply skills.

(d) Informal geometry (1 unit). Informal geometry shall include the following essential elements:
(1) Concepts and skills involving measurement. The student shall be provided opportunities to:
(A) develop the concept of measurement using measuring instruments (metric and customary);
(B) estimate measures; and

(C) choose appropriate units of measurement.

(2) Two- and three-dimensional geometric figures and shapes. The student shall be provided opportunities to:

(A) recognize two- and three-dimensional figures by name;

(B) demonstrate an understanding of the properties of plane and solid figures;

(C) use the properties to solve problems; and

(D) recognize various triangles by shape and use their associated line segments such as altitudes, angle bisectors, and perpendicular bisectors of sides.

(3) Parallelism and perpendicularity. The student shall be provided opportunities to:

(A) recognize and use parallel and perpendicular lines with associated facts regarding the angles formed; and

(B) recognize and use key facts (standard theorems) about common quadrilaterals such as rectangles, parallelograms, rhombuses, squares, and trapezoids.

(4) Concepts of congruence and similarity including scale drawing. The student shall be provided opportunities to:

(A) demonstrate an understanding of congruence as applied to line segments, angles, and geometric figures;

(B) demonstrate a knowledge of similarity and similar figures;

(C) use ratios and proportions to solve for missing parts; and

(D) apply similarity to maps and scale drawings.

(5) Constructions via paper folding as well as compass and straightedge. The student shall be provided opportunities to:

(A) make simple constructions using paper folding and compass and straightedge:

(i) copy a line segment;

(ii) copy an angle;

(iii) bisect an angle;

(iv) construct the perpendicular to a line from a given point outside a line and from a point on a line; on a line;

(v) construct a line parallel to a given line; and

(vi) divide a given segment into a specified number of congruent segments;

(B) use paper folding to construct regular polygons; and

(C) use compass and straightedge to construct regular polygons.

(6) Basic coordinate geometry. The student shall be provided opportunities to:

(A) use Cartesian coordinates;

(B) find the midpoint and the slope of a line;

(C) find the distance between points;

(D) use locus to describe geometric figures; and

(E) translate points, lines, and geometric figures in the plane.

(7) Area and perimeter. The student shall be provided opportunities to:

(A) find areas and perimeters of triangles, parallelograms, trapezoids, and regular polygons;

(B) develop the respective formulas intuitively or with models;

(C) apply the formulas to practical problems involving linear and square units; and

(D) find the approximate areas and perimeters of irregularly shaped figures.

(8) The right triangle. The student shall be provided opportunities to:

(A) use the Pythagorean Theorem in applications to right triangles;

(B) recognize and use trigonometric ratios of sine, cosine, and tangent as related to the right triangle; and

(C) solve practical problems involving the trigonometric ratios.

(9) The circle and sphere. The student shall be provided opportunities to:

(A) recognize and use circles and spheres with related parts such as radius, diameter, arc, chord, tangent, secant, and sector;

(B) compute circumferences and areas of circles; and
(C) solve practical problems involving measurements of circles and spheres.
(10) Volume and surface area. The student shall be provided opportunities to:
(A) compute the lateral and surface area of common solids;
(B) apply the formulas to practical problems related to areas,
(C) compute the volume of common solids;
(D) apply the formulas to practical problems related to capacity and weight; and
(E) find the surface area or volume of irregularly shaped figures.

(c) Algebra I (1 unit). Algebra I shall include the following essential elements:
(1) Concepts and skills involving operations with real numbers and properties of real numbers. The student shall be provided opportunities to:
(A) classify real numbers as integral, rational, or irrational;
(B) define and use the properties of the real numbers;
(C) graph real numbers;
(D) use the order of operations including addition, subtraction, multiplication, and division, and
(E) find absolute value, exponents, additive and multiplicative inverses.
(2) Linear equations and inequalities in one variable. The student shall be provided opportunities to:
(A) solve equations;
(B) solve inequalities;
(C) graph equations and inequalities;
(D) solve equations and inequalities involving absolute value;
(E) use equations and inequalitites in applications and problem-solving situations; and
(F) use formulas to solve problems.
(3) Linear equations and inequalities in two variables. The student shall be provided opportunities to:
(A) solve equations and formulas in two variables;
(B) find intercepts and slope to graph equations;
(C) identify and graph functions;
(D) find the equation of a line;
(E) use the graphing, addition, and substitution methods of solving a system of equations;
(F) graph systems of inequalities; and
(G) use equations and inequalities in applications and problem-solving situations.
(4) Concepts and skills associated with polynomials. The student shall be provided opportunities to:
(A) add, subtract, multiply, and divide polynomials; and
(B) factor polynomials.
(5) Concepts and skills associated with rational expressions. The student shall be provided opportunities to:
(A) simplify rational expressions;
(B) solve problems using ratio and proportion; and
(C) add, subtract, multiply, and divide rational expressions.
(6) Properties of roots and operations with radicals. The student shall be provided opportunities to:
(A) find square roots;
(B) add, subtract, multiply, and divide square roots;
(C) simplify radicals; and
(D) solve simple radical equations.
(7) Concepts and skills associated with quadratic equations. The student shall be provided opportunities to:
(A) graph quadratic equations and functions;
(B) solve quadratic equations by using square roots, graphing, factoring, completing the square, and using the quadratic formula; and

(C) apply quadratic equations.

(f) Algebra II (1 unit). Algebra II shall include the following essential elements:

(1) Concepts and skills associated with open sentences. The student shall be provided opportunities to:

(A) solve open sentences in one variable; and

(B) solve systems of linear open sentences.

(2) Properties of relations and functions. The student shall be provided opportunities to:

(A) investigate relations and their graphs;

(B) find inverse relations;

(C) investigate properties of functions;

(D) find the domain and range of a function;

(E) perform composition of functions; and

(F) use direct and inverse variation.

(3) Properties of the complex number system. The student shall be provided opportunities to:

(A) define a complex number, its additive inverse, conjugate, and absolute value; and

(B) add, subtract, multiply, and divide complex numbers.

(4) Concepts and skills associated with polynomials and rational expressions. The student shall be provided opportunities to:

(A) factor expressions over the set of real numbers;

(B) simplify rational expressions;

(C) perform operations of addition, subtraction, multiplication, and division involving rational expressions; and

(D) simplify complex fractions.

(5) Properties of points and planes in space. The student shall be provided opportunities to:

(A) use coordinate geometry; and

(B) find the distance between points in a plane and find the midpoints of segments.

(6) Concepts and skills associated with matrices and determinants. The student shall be provided opportunities to:

(A) add and multiply matrices;

(B) solve systems of equations using determinants and matrices; and

(C) use determinants or matrices to solve problem situations.

(7) Concepts and skills associated with quadratic functions. The student shall be provided opportunities to:

(A) develop and use the quadratic formula;

(B) find discriminants and zeros of quadratic functions;

(C) write quadratic equations from roots; and

(D) draw graphs using the vertex and axis of symmetry.

(8) Concepts and skills relating to conic sections and systems of quadratics. The student shall be provided opportunities to:

(A) graph equations of circles, ellipses, parabolas, and hyperbolas;

(B) write the equation of a parabola and a circle from the definitions;

(C) identify conic equations;

(D) graph quadratic systems and indicate solution sets; and

(E) solve systems algebraically.

(9) Concepts and skills relating to exponential and logarithmic functions. The student shall be provided opportunities to:

(A) graph functions and inverses;

(B) change equations from logarithmic to exponential form and conversely;

(C) solve logarithmic and exponential equations; and

(D) solve problems using logarithmic and exponential equations.

(10) Concepts and skills relating to higher degree polynomial functions. The student shall be provided opportunities to:

(A) use synthetic division;

(B) apply the Fundamental Theorem of Algebra;

(C) use the Rational Root Theorem; and

(D) graph higher degree polynomial functions with real roots.

(11) Concepts and properties of sequences and series. The student shall be provided opportunities to:

(A) investigate arithmetic and geometric sequences;

(B) find arithmetic and geometric means;

(C) investigate arithmetic and geometric series;

(D) investigate convergent geometric series;

(E) use sequences and series as models of problem situations;

(F) use factorials;

(G) expand binomial powers; and

(H) use the Binomial Theorem.

(g) Geometry (1 unit). Geometry shall include the following essential elements:

(1) The nature of deductive reasoning. The student shall be provided opportunities to:

(A) draw conclusions;

(B) use logic;

(C) use undefined terms and definitions;

(D) use direct proof; and

(E) use indirect proof.

(2) Geometry of the real world. The student shall be provided opportunities to:

(A) find properties of geometric figures;

(B) understand symmetry; and

(C) find area and volume.

(3) Fundamental ideas: lines and angles. The student shall be provided opportunities to:

(A) determine distance and betweenness; and

(B) measure angles.

(4) Some basic postulates and theorems. The student shall be provided opportunities to:

(A) investigate postulates of equality;

(B) use bisection theorems;

(C) understand angle relationships;

(D) use right angle theorems; and

(E) prove theorems.

(5) Congruent triangles. The student shall be provided opportunities to:

(A) use congruence postulates;

(B) prove triangle congruences; and

(C) perform straightedge and compass constructions.

(6) Transformations. The student shall be provided opportunities to study reflections, translations, and rotations.

(7) Inequalities. The student shall be provided opportunities to use:

(A) postulates of inequality;

(B) the exterior angle theorem;

(C) triangle side and angle inequalities; and

(D) the triangle inequality theorem.

(8) Parallel lines. The student shall be provided opportunities to:

(A) find parallel and perpendicular lines;
(B) use the parallel postulate; and
(C) identify angles related to parallel lines.

(9) Quadrilaterals. The student shall be provided opportunities to:
(A) understand classifications and definitions;
(B) use properties of the parallelogram, rhombus, rectangle, square, and trapezoid; and
(C) prove theorems.

(10) Area. The student shall be provided opportunities to:
(A) find the area of polygonal regions; and
(B) apply Heron's Theorem.

(11) Similarity. The student shall be provided opportunities to:
(A) use ratio and proportion;
(B) work with similar triangles;
(C) find proportional line segments;
(D) use the angle bisector theorem; and
(E) find perimeters of similar triangles.

(12) The right angle. The student shall be provided opportunities to:
(A) understand proportions of right triangles;
(B) use the Pythagorean Theorem; and
(C) investigate special right triangles (30°, 60°, isosceles).

(13) Coordinate geometry. The student shall be provided opportunities to:
(A) use Cartesian coordinates;
(B) define and apply locus theorems;
(C) define the straight line;
(D) graph the straight line; and
(E) find distances.

(14) Circles. The student shall be provided opportunities to:
(A) investigate segments related to circles;
(B) understand angles of a circle; and
(C) investigate inscribed and circumscribed circles.

(15) Regular polygons and the circle. The student shall be provided opportunities to:
(A) use related theorems;
(B) find perimeter of regular polygons;
(C) find area of regular polygons;
(D) find circumference and area of a circle; and
(E) investigate sectors and arcs.

(16) Geometric solids. The student shall be provided opportunities to:
(A) investigate lines and planes in space;
(B) investigate polyhedrons, prisms, and spheres;
(C) find surface area and volume of prisms and cylinders; and
(D) find surface area and volume of pyramids, cones, and spheres.

(h) Trigonometry (½ unit). Trigonometry shall include the following essential elements:

(1) Trigonometric functions. The student shall be provided opportunities to:
(A) understand relations and functions;
(B) define the sine, cosine, tangent, secant, cosecant, and cotangent functions;
(C) find values of the trigonometric functions; and
(D) solve right triangle problems.

(2) Properties of trigonometric and circular functions. The student shall be provided opportunities to:

(A) graph functions;
(B) use radian measure; and
(C) use periodic motion.

(3) Applications of trigonometric and circular functions. The student shall be provided opportunities to:
(A) understand the reciprocal, the quotient, and the Pythagorean properties;
(B) use trigonometric identities; and
(C) solve trigonometric equations.

(4) Inverses of trigonometric and circular functions. The student shall be provided opportunities to:
(A) graph inverse functions; and
(B) investigate properties of inverse functions.

(5) Triangle problems. The student shall be provided opportunities to use:
(A) the law of cosines;
(B) the law of sines; and
(C) vectors.

(6) Application of trigonometric and circular functions. The student shall be provided opportunities to use:
(A) polar coordinates;
(B) complex numbers;
(C) power series; and
(D) hyperbolic functions.

(i) Elementary analysis (½ unit). Elementary analysis shall include the following essential elements:

(1) Properties of the real number system and other mathematical systems. The student shall be provided opportunities to:
(A) understand the structure of mathematical systems (undefined and defined terms, operations, postulates, and theorems);
(B) investigate groups, rings, and fields;
(C) understand matrices (addition and multiplication); and
(D) understand ordered fields (properties and proofs).

(2) Concepts and skills involved in the analysis of relations and functions and their properties and graphs. The student shall be provided opportunities to:
(A) review domain, range, and inverse;
(B) find composition of functions;
(C) find inverse functions;
(D) identify increasing and decreasing functions;
(E) identify and graph periodic functions;
(F) perform operations on functions; and
(G) identify continuous functions.

(3) Properties and graphs of special functions. The student shall be provided opportunities to use:
(A) polynomial functions;
(B) exponential functions;
(C) logarithmic functions; and
(D) circular functions.

(4) Logic concepts applied in mathematical induction. The student shall be provided opportunities to:
(A) find patterns and make generalizations; and
(B) use the theorem of mathematical induction.

(5) Concepts and skills related to higher degree polynomial functions. The student shall be provided opportunities to:
(A) use the Division Theorem and Remainder Theorem;

(B) use synthetic division;
(C) use the Rational Root Theorem;
(D) use Descartes' Rule of Signs and the Upper and Lower Bound Theorem;
(E) find rational roots of polynomials;
(F) apply the Fundamental Theorem of Algebra; and
(G) graph polynomial functions.

(6) Concepts and skills involved in working with sequences and series. The student shall be provided opportunities to:
(A) use general terms;
(B) perform summation proofs;
(C) use the Binomial Theorem, including factorials and combinations; and
(D) find limits of sequences.

(j) Analytic geometry (½ unit). Analytic geometry shall include the following essential elements:
(1) The plane. The student shall be provided opportunities to:
(A) investigate the geometry of ordered pairs;
(B) investigate lines, polygons, and curves;
(C) perform basic operations with vectors; and
(D) use parametric equations.
(2) Space. The student shall be provided opportunities to:
(A) use space coordinatization;
(B) investigate the geometry of ordered triples;
(C) investigate lines and planes; and
(D) use vectors in space.
(3) Curves in the plane. The student shall be provided opportunities to:
(A) use vector equations for lines;
(B) find Cartesian equations for lines;
(C) use families of lines;
(D) investigate the polar coordinate system;
(E) relate polar and Cartesian coordinates and equations; and
(F) sketch and find the intersections of curves.
(4) Circles, cylinders, and spheres. The student shall be provided opportunities to investigate equations and properties.
(5) Conics. The student shall be provided opportunities to:
(A) derive the equations of circles, parabolas, ellipses, and hyperbolas;
(B) solve second-degree equations; and
(C) use conics in applications.
(6) Transformations. The student shall be provided opportunities to:
(A) use translations, invariants, reflections, rotations, and composition of transformations; and
(B) use transformations to simplify equations.

(k) Pre-calculus (½-1 unit). Pre-calculus shall include the following essential elements:
(1) Real numbers and coordinates. The student shall be provided opportunities to:
(A) understand the real number line;
(B) use field properties; and
(C) write coordinates in two- and three-space.
(2) Functions and their graphs. The student shall be provided opportunities to:
(A) understand functions: notation, language, and graphs;
(B) perform operations on functions;

(C) identify decreasing, increasing, and periodic functions;
(D) graph functions; and
(E) find composite and inverse functions.

(3) Polynomial and rational functions. The student shall be provided opportunities
(A) use the Division Theorem and the Factor Theorem;
(B) use synthetic division;
(C) use the Rational Root Theorem;
(D) use Descartes' Rule of Signs and the Upper and Lower Bounds Theorem;
(E) find rational roots of polynomials;
(F) apply the Fundamental Theorem of Algebra; and
(G) graph polynomial functions.

(4) Exponential and logarithmic functions. The student shall be provided opportunities to:
(A) define exponential functions;
(B) apply exponential functions;
(C) define logarithmic functions;
(D) use properties and graph logarithmic functions;
(E) solve exponential and logarithmic equations; and
(F) use natural logarithms (the number "e").

(5) Circular functions, their properties and applications. The student shall be provided opportunities to:
(A) find angle measurement;
(B) identify the wrapping function;
(C) identify periodic functions;
(D) use applications of circular functions; and
(E) find inverse functions.

(6) Trigonometric functions, their properties and applications. The student shall be provided opportunities to:
(A) define the trigonometric functions;
(B) find the value of the trigonometric functions;
(C) graph the trigonometric functions;
(D) solve right triangle problems;
(E) solve general triangles;
(F) solve trigonometric equations;
(G) derive fundamental identities; and
(H) prove and use identities.

(7) Vectors. The student shall be provided opportunities to:
(A) investigate vectors in the plane;
(B) use vectors in space; and
(C) use vector equations for lines.

(8) Complex numbers. The student shall be provided opportunities to:
(A) find sums, products, differences, and quotients of complex numbers;
(B) represent complex numbers graphically;
(C) use the trigonometric forms of complex numbers;
(D) use polar coordinates; and
(E) graph equations in polar form.

(9) Sequences and series. The student shall be provided opportunities to:
(A) identify arithmetic and geometric sequences and series;
(B) find sequences and sums;
(C) use mathematical induction;
(D) find the limit of a sequence; and

(E) use the Binomial Theorem.

(10) Second degree relations. The student shall be provided opportunities to:

(A) derive the equations for circles, parabolas, ellipses, and hyperbolas;

(B) graph second degree equations;

(C) perform translation and rotation of axes;

(D) use conics in applications; and

(E) solve general second degree equations.

(l) Mathematics of consumer economics (½-1 unit). Mathematics of consumer economics shall include the following essential elements:

(1) Concepts and skills used when evaluating personal income and benefits. The student shall be provided opportunities to:

(A) understand aspects of the free enterprise system and its benefits;

(B) investigate wages and deductions;

(C) investigate benefits offered by companies, unions, and organizations;

(D) investigate social security and income tax; and

(E) investigate stocks and bonds.

(2) Concepts and skills involved in banking, saving, and borrowing. The student shall be provided opportunities to:

(A) understand credit financing;

(B) investigate the Federal Reserve System;

(C) investigate local bank services;

(D) investigate trust funds and estate planning;

(E) investigate different types of loans (car, home, personal); and

(F) investigate types of institutions that offer loans.

(3) Concepts and skills associated with personal expenditures. The student shall be provided opportunities to investigate expenditures for:

(A) food, shelter, and clothing;

(B) transportation;

(C) insurance;

(D) medical and dental expenses;

(E) education;

(F) retirement and annuities; and

(G) miscellaneous.

(4) Concepts and skills involved in making a budget. The student shall be provided opportunities to:

(A) make informed consumer decisions; and

(B) practice sound money management (spending and saving).

(m) Computer mathematics I (½-1 unit). Computer mathematics I shall include the following essential elements:

(1) Fundamentals of computer systems. The student shall be provided opportunities to:

(A) investigate major components, including input, storage, processing, and output;

(B) learn computer-system vocabulary; and

(C) investigate the binary system.

(2) Programming in the BASIC language. The student shall be provided opportunities to:

(A) use flowcharts;

(B) learn elements of BASIC;

(C) interpret error messages;

(D) use system commands;

(E) interpret input and output;
(F) understand transfer of control;
(G) use FOR-NEXT loops;
(H) understand arrays, functions, and subroutines;
(I) use string variables; and
(J) use BASIC in problem-solving applications.

(3) Using the computer for topics in consumer mathematics. The student shall be provided opportunities to use the computer to solve problems related to:

(A) salary, commission, and benefits;
(B) net pay;
(C) checking and savings accounts;
(D) ratio, proportion, and percent;
(E) loans and charge accounts;
(F) budgeting; and
(G) investments.

(4) Using the computer for topics in algebra. The student shall be provided opportunities to use the computer to solve problems related to:

(A) absolute value;
(B) slope of the graph of a linear equation;
(C) x- and y- intercepts of the graph of a linear equation;
(D) graphs of functions and relations (linear, quadratic, and polynominal);
(E) solutions to linear equations and inequalities;
(F) nth roots of numbers;
(G) arithmetic and geometric means;
(H) factorization of polynomials;
(I) solutions of quadratic equations; and
(J) solutions of quadratic systems.

(5) Using the computer for topics in geometry. The student shall be provided opportunities to use the computer to solve problems related to:

(A) perimeter of quadrilaterals and triangles;
(B) area of rectangles, circles, triangles, trapezoids, and parallelograms;
(C) classification of angles as acute, right, or obtuse;
(D) volume of a rectangular solid, sphere, right circular cylinder, and prism;
(E) similar and congruent triangles;
(F) classification of triangles as equilateral, isosceles, or scalene;
(G) lateral area and total surface area of a right circular cylinder, and surface area of a sphere;
(H) missing sides of right triangles;
(I) collinear points in a coordinate plane;
(J) interior angles of a polygon;
(K) regular and nonregular polygons; and
(L) segments and points dividing segments (midpoint, etc.).

(6) Using the computer for topics in number theory. The student shall be provided opportunities to use the computer to solve problems related to:

(A) prime numbers and relatively prime integers;
(B) perfect, abundant, and deficient numbers;
(C) greatest common divisor and least common multiple;
(D) sorting numbers;
(E) divisibility; and
(F) integral factorization.

(7) Using the computer for topics in probability and statistics. The student shall be provided opportunities to use the computer to solve problems related to:

(A) permutations and combinations;

(B) random numbers; and

(C) mean, median, and mode.

(n) Computer mathematics II (½-1 unit). Computer mathematics II shall include the following essential elements:

(1) Computer structure and design. The student shall be provided opportunities to:

(A) understand internal organization of microcomputers;

(B) use peripherals; and

(C) understand computer networking.

(2) Numeration systems and alphanumeric codes. The student shall be provided opportunities to:

(A) learn the relationship between numeration systems and computing;

(B) understand binary, octal, and hexadecimal numeration; and

(C) perform conversions.

(3) Programming languages and procedures. The student shall be provided opportunities to:

(A) understand syntactical requirements;

(B) learn elements of languages such as BASIC, COBOL, FORTRAN, Pascal, etc.;

(C) write structured programs;

(D) interpret file structures;

(E) use data storage and retrieval;

(F) perform manipulation of data;

(G) write sort and search routines;

(H) interpret formatted output; and

(I) write CAI programs.

(4) Using the computer for topics in algebra. The student shall be provided opportunities to use the computer to solve problems related to:

(A) polynomial equations with rational roots;

(B) n x n systems of equations;

(C) the binomial theorem;

(D) sequences and series; and

(E) matrix equations.

(5) Using the computer for topics in coordinate geometry. The student shall be provided opportunities to use the computer to solve problems related to:

(A) translations, rotations, and reflections;

(B) dilations and contractions;

(C) families of lines and curves;

(D) three dimensional coordinate geometry; and

(E) estimating the value of π.

(6) Using the computer for topics in probability and statistics. The student shall be provided opportunities to use the computer to solve problems related to:

(A) permutations;

(B) combinations;

(C) probability experiments-predicting;

(D) graphing data; and

(E) random numbers.

(7) Using the computer for topics in advanced mathematics. The student shall be provided opportunities to use the computer to solve problems related to:

(A) number theory;
(B) intuitive calculus;
(C) solving triangles by trigonometry; and
(D) vectors.

(8) Using the computer for topics in other content areas. The student shall be provided opportunities to use the computer to solve problems related to:
(A) topics in science;
(B) topics in economics; and
(C) topics in business.

(o) Probability and statistics (½ unit). Probability and statistics shall include the following essential elements:

(1) Concepts and skills associated with various counting procedures. The student shall be provided opportunities to:
(A) find permutations;
(B) count combinations; and
(C) apply the Binomial Theorem.

(2) Concepts and skills associated with determining the probability of an event. The student shall be provided opportunities to:
(A) perform probability experiments;
(B) identify independent and dependent events and their probabilities;
(C) construct sample spaces;
(D) investigate randomness in sampling;
(E) determine conditional probability;
(F) apply other probability rules; and
(G) predict outcomes.

(3) Experience with different types of probability distributions. The student shall be provided opportunities to:
(A) construct and interpret frequency distributions;
(B) identify random variables;
(C) determine arithmetic and geometric means;
(D) find standard deviation;
(E) apply Chebyshev's Theorem;
(F) identify continuous and joint distributions;
(G) recognize and interpret the normal curve; and
(H) use the binomial distribution to find probabilities.

(4) Use of inferential statistics to make decisions or to determine validity. The student shall be provided opportunities to:
(A) apply the theory of sampling; and
(B) test hypotheses.

(p) Calculus (½-1 unit). Calculus shall include the following essential elements:

(1) Concepts associated with the limit of a function. The student shall be provided opportunities to:
(A) represent limits through geometric interpretations;
(B) apply various limit theorems; and
(C) understand continuity.

(2) Concepts and skills associated with the derivative. The student shall be provided opportunities to:
(A) investigate lines tangent to curves;
(B) derive the formulas for the derivatives from the limit of a function;

(C) use theorems and properties of the derivative;
(D) find maxima and minima;
(E) apply the Mean Value Theorem;
(F) sketch curves; and
(G) use concepts and skills in applications (velocity, acceleration).

(3) Concepts and skills associated with the integral and techniques of integration. The student shall be provided opportunities to:
(A) approximate areas;
(B) describe areas as a limit;
(C) use the Fundamental Theorem of Calculus;
(D) develop and use formulas;
(E) find volumes of revolution by the disk and shell methods;
(F) work with continuous functions;
(G) integrate by substitution;
(H) integrate by parts; and
(I) apply integral concepts to find fluid pressure, center of mass, etc.

(4) Applications of calculus to special functions. The student shall be provided opportunities to:
(A) differentiate and integrate special functions such as:
(i) trigonometic functions;
(ii) logarithmic functions;
(iii) exponential functions; and
(iv) functions written in polar coordinates; and
(B) apply concepts to differential equations.

(5) Concepts and skills associated with infinite series. The student shall be provided opportunities to:
(A) relate infinite series to integrals;
(B) investigate properties of infinite series; and
(C) test for convergence or divergence.

(q) Number theory (an independent study course—½ unit). Number theory shall include the following essential elements:

(1) Concepts and skills involving the use of integers. The student shall be provided opportunities to:
(A) understand mathematical induction;
(B) apply the Sieve of Eratosthenes;
(C) use the Euclidean algorithm;
(D) apply the Fundamental Theorem of Arithmetic;
(E) find the number of divisors and the sum of divisors of a given integer;
(F) find the greatest common divisor; and
(G) identify perfect numbers.

(2) Concepts and skills relating to primes. The student shall be provided opportunities to:
(A) identify Pythagorean triples;
(B) prove there are infinitely many primes;
(C) investigate Mersenne numbers; and
(D) find the Euler function of a given integer.

(3) Concepts and skills associated with divisibility and congruence. The student shall be provided opportunities to:
(A) apply the properties of divisibility;
(B) identify field properties for given modular systems;
(C) determine a residue system for a given modulus;
(D) apply Euler's theorem;

(E) identify Diophantine equations;
(F) apply Wilson's theorem;
(G) apply the Chinese remainder theorem; and
(H) find quadratic congruence.

(r) Linear algebra (an independent study course—½ unit). Linear algebra shall include the following essential elements:

(1) Linear equations and matrices. The student shall be provided opportunities to:
(A) solve linear systems using matrices;
(B) apply properties of matrix operations; and
(C) identify the inverse of a matrix.

(2) Determinants. The student shall be provided opportunities to:
(A) apply definitions and properties;
(B) use cofactor expansion; and
(C) apply skills.

(3) Vectors and vector spaces. The student shall be provided opportunities to:
(A) investigate:
(i) vectors in the plane;
(ii) n-vectors; and
(iii) vector spaces and subspaces;
(B) identify linear independence;
(C) find the rank of a matrix; and
(D) work with orthonormal bases in R^n.

(4) Linear transformations. The student shall be provided opportunities to use linear transformation and matrix representations.

(5) Eigenvalues, Eigenvectors. The student shall be provided opportunities to investigate:
(A) diagonalization; and
(B) diagonalization of symmetric matrices.

(6) Applications. The student shall be provided opportunities to apply skills to:
(A) conic sections and quadric surfaces;
(B) the theory of games; and
(C) the Fibonacci sequence.

(s) Linear programming (an independent study course—½ unit). Linear programming shall include the following essential elements:

(1) Concepts involving mathematical modeling. The student shall be provided opportunities to:
(A) investigate the objective function, the constraints, and the non-negativity requirement for a given linear programming model; and
(B) graph the constraints, identifying convex and extreme points, the area of feasible solutions, and values of the variables that optimize.

(2) Concepts and skills involving the simplex method. The student shall be provided opportunities to:
(A) solve a linear programming model by the simplex method;
(B) use a linear programming production model;
(C) set up linear programming models from problem situations; and
(D) interpret final tableaus for optimal strategies and limiting factors.

(3) Variations and applications of the simplex method. The student shall be provided opportunities to:
(A) use segmentation, multiple tableaus, or approximation by a linear function;
(B) use goal programming; and
(C) use linear programming to find solutions to practical situational problems.

(t) History of mathematics (an independent study course—½ unit). History of mathematics shall include the following essential elements:

(1) Historical development of numbers and numerals. The student shall be provided opportunities to:
- (A) examine at least two ancient numeration systems;
- (B) investigate place-value systems other than ten;
- (C) research the origin of zero;
- (D) investigate prime and composite numbers and persons associated with their development;
- (E) understand rational numbers in fractional and decimal forms;
- (F) research persons responsible for proof of the Pythagorean Theorem;
- (G) investigate irrational numbers and the persons who researched them; and
- (H) investigate complex numbers and their development.

(2) Historical development of methods of computation. The student shall be provided opportunities to:
- (A) investigate calculating devices;
- (B) examine the capability of various computers; and
- (C) investigate the use of logarithms.

(3) Historical development of geometry. The student shall be provided opportunities to:
- (A) examine the applications of practical geometry in ancient civilizations;
- (B) investigate Euclidean and non-Euclidean geometries;
- (C) investigate the golden rectangle and applications;
- (D) examine geometry in construction techniques;
- (E) research unsolvable construction problems from antiquity;
- (F) study regular polyhedrons and their discoverers; and
- (G) examine conic sections.

(4) Historical development of algebra. The student shall be provided opportunities to:
- (A) contrast algebraic symbols with other symbols meaning the same thing, and research their use;
- (B) examine the algebra of ancient civilizations;
- (C) identify the contribution of Diophantus of Alexandria; and
- (D) investigate persons contributing to the solution of general polynomial equations of the 3rd, 4th, and 5th degrees.

(5) Persons associated with modern mathematics. The student shall be provided opportunities to examine nineteenth or twentieth century mathematicians or both and their contributions.

(u) Survey of mathematics (an independent study course—½ unit). Survey of mathematics shall include the following essential elements:

(1) Concepts and skills involving sets and logic. The student shall be provided opportunities to:
- (A) investigate relations, equivalence relations, and comparisons of finite and infinite sets;
- (B) use truth tables; and
- (C) use binary variables to solve logic problems.

(2) Concepts relating to numbers and numerals. The student shall be provided opportunities to:
- (A) examine ancient numeration systems; and
- (B) apply properties and relationships of subsets of the complex number system.

(3) Concepts relating to probability and statistics. The student shall be provided opportunities to:
- (A) use patterns to establish conclusions;
- (B) use Pascal's triangle;
- (C) determine probability of events;
- (D) find measures of central tendency; and
- (E) apply the normal distribution curve.

(4) Concepts relating to mathematical systems. The student shall be provided opportunities to:
- (A) explore finite and abstract systems and their operations; and

(B) examine properties of groups and fields.

(5) Concepts relating to numerical trigonometry. The student shall be provided opportunities to:

(A) solve practical problems involving right triangles using trigonometric ratios; and

(B) solve practical problems involving oblique triangles using the laws of sines and cosines.

(v) Advanced mathematics for business (½-1 unit). Advanced mathematics for business shall include the following essential elements:

(1) Concepts and skills relating to probability and statistics. The student shall be provided opportunities to:

(A) construct sample spaces;

(B) apply counting principles;

(C) find the probability of simple and compound events;

(D) use the probability function;

(E) determine conditional probability;

(F) use Bayes' formula;

(G) construct frequency distributions;

(H) apply concepts to grouped data;

(I) determine mean, median, and mode; and

(J) find and interpret variance and standard deviation.

(2) Concepts relating to random variables and probability functions. The student shall be provided opportunities to:

(A) recognize random variables;

(B) apply probability functions for a finite random variable;

(C) identify Bernoulli random variables;

(D) describe continuous probability distributions;

(E) recognize and interpret standard normal distributions;

(F) find the expected value of a random variable;

(G) determine variance and standard deviation; and

(H) use Chebyshev's inequality.

(3) Concepts and skills associated with linear equations and inequalities. The student shall be provided opportunities to:

(A) study properties of linear equations and inequalities in one and two variables;

(B) work with a rectangular coordinate system;

(C) solve systems of linear equations and inequalities; and

(D) work with matrices.

(4) Concepts relating to linear programming. The student shall be provided opportunities to:

(A) use the geometric approach; and

(B) apply the simplex method.

(5) Concepts and skills relating to finance. The student shall be provided opportunities to:

(A) determine arithmetic and geometric means;

(B) find simple and compound interest; and

(C) determine present and future values of annuities.

(6) Concepts relating to limits. The student shall be provided opportunities to:

(A) interpret the definition geometrically;

(B) work with basic theorems;

(C) determine limits of simple polynomial expressions; and

(D) find limits of functions requiring a "rationalizing" step.

(7) Concepts and skills associated with derivatives. The student shall be provided opportunities to:

(A) interpret the definition geometrically;

(B) work with basic theorems and their applications; and
(C) use the chain rule.
(8) Concepts and skills associated with integration. The student shall be provided opportunities to:
(A) determine area by approximation;
(B) use summation notation and common theorems;
(C) show area as a limit;
(D) use the definite integral;
(E) describe area as an integral; and
(F) apply basic theorems of integration.

§75.64 *Science.*

(a) Biology I (1 unit). Biology I shall be a laboratory-oriented course and shall include the following essential elements:
(1) Manipulative laboratory skills. The student shall be provided opportunities to:
(A) demonstrate the safe use of biological equipment and selected chemicals; and
(B) prepare display collections of biological specimens.
(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:
(A) observe plants, animals, and protists in their environment;
(B) examine biological specimens; and
(C) recognize patterns in nature.
(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to classify plants, animals, protists, and viruses according to similarities and differences.
(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:
(A) describe biological processes and interactions; and
(B) explain meaningful arrangements of biological information.
(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:
(A) measure biological quantities; and
(B) plot data on graphs and other displays.
(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:
(A) predict the outcome of manipulating a variable; and
(B) deduce a biological hypothesis from experimental data.
(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to:
(A) analyze scale models of DNA and RNA;
(B) compare and contrast modes of defense used by organisms;
(C) compare adaptations of organisms to environmental changes; and
(D) contrast human activities that affect the natural environment.
(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to clarify operational definitions used in explaining digestion, respiration, circulation, reproduction of organisms, and skeletal, nervous, and endocrine systems.
(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to:
(A) identify the variables remaining constant, the variables being manipulated, and the variables responding in an investigation in biology; and
(B) choose an experimental design to test a biological hypothesis.

(10) Application of science in daily life. The student shall be provided opportunities to:

(A) analyze the economic importance of microbes, plants, and animals;

(B) evaluate consumer skills as they affect human well-being; and

(C) evaluate the applications and career implications of biology principles and the findings of research.

(b) Chemistry I (1 unit). Chemistry I shall be a laboratory-oriented course and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to demonstrate the safe use of chemical laboratory equipment and supplies.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe chemical reactions; and

(B) explore the factors governing the rate of a chemical change.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify chemical reactions of substances according to similarities and differences in properties; and

(B) sequence a qualitative analysis scheme.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) describe chemical processes; and

(B) explain meaningful arrangements of chemical information.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) measure chemical quantities (reacting mass ratios, reacting volume ratios, effects of catalysts, effects of temperature); and

(B) plot data on graphs and other displays.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:

(A) predict an outcome from trends in chemical data using extrapolation or interpolation; and

(B) formulate a chemical hypothesis.

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to:

(A) compare models of chemical and nuclear reactions;

(B) contrast the chemical properties of materials; and

(C) compare atomic structures of simple elements.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to clarify operational definitions used in explaining chemical and nuclear processes.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to:

(A) identify the variables remaining constant, the variables being manipulated, and the variables responding in a chemistry investigation; and

(B) manage an experimental apparatus to test a chemical hypothesis.

(10) Applications of science in daily life. The student shall be provided opportunities to:

(A) explain the application of chemical and nuclear processes; and

(B) evaluate the applications and career implications of chemistry and nuclear principles and the findings of research.

(c) Physics I (1 unit). Physics I shall be a laboratory-oriented course and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to demonstrate the safe use of physics laboratory equipment and supplies.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to observe physics phenomena.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify physical interactions according to similarities; and

(B) sequence a physics investigation.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to describe physical processes.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) measure physical quantities; and

(B) plot data on graphs and other displays.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:

(A) predict the outcome of a physics investigation from trends in data using extrapolation or interpolation; and

(B) deduce a physics hypothesis from cause-and-effect relationships.

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to:

(A) evaluate scale models of vector problems;

(B) compare the functions of electronic circuits; and

(C) compare the electrical efficiency of appliances.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to clarify operational definitions used in explaining physics processes.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to:

(A) identify the variables remaining constant, the variables being manipulated, and the variables responding in an investigation in physics; and

(B) choose an experimental design to test an hypothesis in physics.

(10) Application of science in daily life. The student shall be provided opportunities to:

(A) apply principles of physics to an investigation; and

(B) evaluate the applications and career implications of physics principles and the findings of research.

(d) Physical science (1 unit). Physical science shall be a laboratory-oriented course and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to demonstrate the safe use of physical science laboratory equipment and selected chemicals.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe physical and chemical properties of matter;

(B) observe the effects of forces on matter; and

(C) explore magnetic and electrical interactions.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to classify chemicals according to similarities of properties.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) describe physical and chemical interactions; and

(B) discuss the factors that affect the motions of objects.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) measure physical and chemical quantities; and

(B) plot data on graphs and other displays.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:

(A) formulate a physical science hypothesis; and

(B) predict the outcome of a physical science activity from trends in data using extrapolation or interpolation.

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to:

(A) compare models of atoms and machines;

(B) compare and contrast chemicals according to their properties; and

(C) compare objects according to their properties.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to clarify operational definitions used in explaining precipitation, acid-base indicators, force meters, electroscopes, and simple machines.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to:

(A) identify the variables remaining constant, the variables being manipulated, and the variables responding in physical science investigations; and

(B) manage an experimental apparatus to test a physical science hypothesis.

(10) Application of science in daily life. The student shall be provided opportunities to:

(A) analyze the use of chemicals in everyday activities of the home and industry;

(B) apply alternative sources of energy to work; and

(C) evaluate the applications and career implications of physical science principles and the findings of research.

(c) Biology II (1 unit). Biology II shall be a laboratory-oriented course and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to demonstrate the safe use of biological equipment and chemicals.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe complex biological phenomena; and

(B) explore biological processes.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify biological organisms according to similarities and differences; and

(B) sequence a biological investigation.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to explain complex biological processes.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) measure biological data; and

(B) plot data on graphs and displays.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:

(A) predict the outcome of a biological activity using trends in data; and

(B) formulate a biological hypothesis.

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to:

(A) analyze growth rates under varied conditions;

(B) compare biological functions in selected organisms; and

(C) compare adaptations of organisms to environmental changes.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to clarify operational definitions used in explaining advanced-level biological principles.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to:

(A) identify the variables remaining constant, the variables being manipulated, and the variables responding in an investigation in advanced-level biology; and

(B) manage an experimental design to test an advanced-level biological hypothesis.

(10) Application of science in daily life. The student shall be provided opportunities to:

(A) apply biological principles to medical science and to technology; and

(B) evaluate the applications and career implications of biology principles and the findings of research.

(f) Physiology and anatomy (½-1 unit). Physiology and anatomy shall be a laboratory-oriented course and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:

(A) demonstrate the safe use of laboratory chemicals and equipment; and

(B) demonstrate laboratory techniques of preparing dry- and wet-mount slides.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe anatomical structures; and

(B) examine physiological systems.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to classify anatomical structures according to their physiological functions.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) describe the physiological functions of selected anatomical structures; and

(B) explain the organization of body function.

(5) Experience in concepts and skills using relationships to a standard. The student shall be provided opportunities to:

(A) measure experimental data (mass and volume of specimens); and

(B) plot data on graphs and other displays.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:

(A) predict outcomes of physiology and anatomy functions using inferences; and

(B) deduce a physiological inference.

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to compare anatomical structures to physiological functions.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to clarify operational definitions used in describing physiological systems.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to:

(A) identify the variables held constant, the variables being manipulated, and the variables responding in an investigation in physiology and anatomy; and

(B) manage an experimental design to test an hypothesis in physiology and anatomy.

(10) Application of science in daily life. The student shall be provided opportunities to:

(A) apply the principles of physiology to human health and well-being; and

(B) evaluate the applications and career implications of physiology and anatomy principles and the findings of research.

(g) Chemistry II (1 unit). Chemistry II shall be a laboratory-oriented course and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:

(A) demonstrate the safe use of advanced-level chemistry laboratory equipment and supplies; and

(B) demonstrate advanced-level chemistry laboratory techniques.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe advanced-level chemical reactions; and

(B) explore advanced-level chemical reaction rates.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify advanced-level chemical reactions according to similarities and differences; and

(B) sequence a chemical investigation.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) describe advanced-level chemical reactions and their stoichiometry; and

(B) explain chemical reactions and kinetics.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) measure advanced-level chemical quantitites; and

(B) plot data on graphs and other displays.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to predict an outcome of a chemical investigation from trends in data using extrapolation or interpolation.

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to:

(A) compare models of chemical and nuclear reactions; and

(B) evaluate chemical reaction rates under varied conditions.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to clarify operational definitions used in explaining advanced-level chemical and nuclear processes.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to:

(A) identify the variables remaining constant, the variables being manipulated, and the variables responding in an investigation in advanced-level chemistry; and

(B) manage an experimental design to test an advanced-level chemical hypothesis.

(10) Application of science in daily life. The student shall be provided opportunities to:

(A) explain the applications of chemical and nuclear processes; and

(B) evaluate the applications and career implications of chemistry and nuclear principles and the findings of research.

(h) Physics II (1 unit). Physics II shall be a laboratory-oriented course and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:

(A) demonstrate the safe use of advanced-level physics laboratory equipment and supplies; and

(B) demonstrate advanced-level physics laboratory techniques.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe advanced-level physics reactions; and

(B) examine advanced-level physics processes.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify advanced-level physics actions, according to similarities and differences; and

(B) sequence an advanced-level physics investigation.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to describe advanced-level physics processes.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) measure advanced-level physics quantities; and

(B) plot data on graphs and other displays.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:

(A) predict the outcome of a physics activity using trends in data; and

(B) formulate a physics hypothesis.

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to:

(A) compare physical interactions under varied conditions; and

(B) evaluate the electrical efficiency of machines.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to demonstrate the use of operational definitions in explaining advanced-level physics processes.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to:

(A) identify the variables remaining constant, the variables being manipulated, and the variables responding in an investigation in advanced-level physics; and

(B) develop and analyze an experimental design to test an advanced-level physics hypothesis.

(10) Application of science in daily life. The student shall be provided opportunities to evaluate the applications and career implications of physics principles and the findings of research.

(i) Geology (½-1 unit). Geology shall be a laboratory-oriented course and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:

(A) demonstrate the safe use of geologic equipment and supplies; and

(B) demonstrate field/laboratory techniques of using goggles and selected chemicals in testing minerals.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe geological structures (anticline, syncline, faults); and

(B) examine earth materials.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify earth materials, structures, and phenomena according to similarities and differences in crystal structure, cleavage, and chemical structure; and

(B) sequence a geological investigation.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to describe earth materials and geologic structures.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) measure geological quantities; and

(B) plot data on graphs, maps, and other displays.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:

(A) predict the outcome of a geological investigation from trends in data using extrapolation or interpolation; and

(B) formulate a geological hypothesis.

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to:

(A) compare scale models of geological structures;

(B) contrast the properties of minerals and fossils; and

(C) compare geologic time in relation to life forms and events.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to clarify operational definitions used in explaining geological processes.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to:

(A) identify the variables remaining constant, the variables being manipulated, and the variables responding in an investigation in geology; and

(B) choose an experimental design to test a geological hypothesis.

(10) Application of science in daily life. The student shall be provided opportunities to evaluate the applications and career implications of geology principles and the findings of research.

(j) Meteorology (½-1 unit). Meteorology shall be a laboratory-oriented course and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to demonstrate the safe use of meteorological field/laboratory apparatus.

(2) The use of skills of acquiring data through the senses. The student shall be provided opportunities to:

(A) observe meteorological phenomena; and

(B) examine meteorological data.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to classify meteorological conditions according to similarities and differences.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) describe meteorological conditions and types of weather associated with them; and

(B) describe the factors that influence weather.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) measure meteorological conditions (temperature, humidity, pressure);

(B) place symbols on weather maps; and

(C) plot data on graphs and other displays.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:

(A) predict the outcome of a meteorological activity from trends in data using extrapolation or interpolation; and

(B) formulate a meteorologic hypothesis.

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to contrast and compare models of meteorological conditions and patterns.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to clarify operational definitions used in explaining meteorological processes.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to:

(A) identify the variables remaining constant, the variables being manipulated, and the variables responding in an investigation in meteorology; and

(B) manage an experimental design to test a meteorologic hypothesis.

(10) Applications of science in daily life. The student shall be provided opportunities to evaluate the applications and career implications of meteorology principles and the findings of research.

(k) Astronomy (½-1 unit). Astronomy shall be a laboratory-oriented course and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to demonstrate the safe use of astronomical laboratory equipment.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe astronomical objects; and

(B) examine astronomical motions.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify astronomical objects according to similarities and differences; and

(B) organize astronomical data into meaningful form.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) describe astronomical objects; and

(B) describe the theories of the formation of the solar system and the universe.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) measure astronomical quantities; and

(B) plot data on graphs and other displays.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:

(A) predict the outcome of an astronomical activity from trends in data using inferences; and

(B) formulate an astronomical hypothesis.

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to construct and compare models of astronomical objects.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to clarify operational definitions in explaining astronomical cycles and processes.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to:

(A) identify the variables remaining constant, the variables being manipulated, and the variables responding in an investigation in astronomy; and

(B) identify an experimental design to test an astronomical hypothesis.

(10) Application of science in daily life. The student shall be provided opportunities to:

(A) analyze the applications and benefits derived from the space program; and

(B) evaluate the applications and career implications of astronomy principles and the findings of research.

(l) Marine science (½-1 unit). Marine science shall be a laboratory-oriented course and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:

(A) demonstrate the safe use of oceanographic laboratory/field equipment; and

(B) demonstrate laboratory/field techniques of investigation in marine science.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe marine organisms; and

(B) explore selected cycles found in marine environments.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify marine organisms according to similarities and differences; and

(B) sequence a marine science investigation.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to describe marine science processes and ecological patterns.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) measure marine science data; and

(B) plot data on graphs and other displays.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:

(A) predict an outcome of a marine science activity using inference; and

(B) formulate a marine science hypothesis.

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to:

(A) compare biological processes in selected marine organisms;

(B) evaluate the impact that oil spills have on intertidal environments; and

(C) compare geologic time in relation to life forms and events.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to clarify operational definitions used in explaining marine science principles.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to:

(A) identify the variables remaining constant, the variables being manipulated, and the variables responding in an investigation in marine science; and

(B) choose an experimental design to test an hypothesis in marine science.

(10) Application of science in daily life. The student shall be provided opportunities to evaluate the applications and career implications of marine science principles and the findings of research.

(m) Environmental science (½-1 unit). Environmental science shall be a laboratory-oriented course and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:

(A) demonstrate the safe use of environmental science laboratory/field equipment; and

(B) demonstrate proper laboratory/field techniques in environmental science.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe food webs, chains, and pyramids in the environment; and

(B) examine environmental science principles.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify environmental science objects, actions, or events according to similarities and differences; and

(B) sequence an environmental science investigation.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) describe the effects of pollutants on the ecological balance; and

(B) interpret long-term effects of the use of insecticides.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) measure environmental science quantities; and

(B) plot data on graphs and other displays.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to predict an outcome of an environmental science activity from trends in data.

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to:

(A) compare environmental populations under varying conditions; and

(B) contrast the factors that influence the current supply of natural resources.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to clarify operational definitions used in explaining environmental science principles.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to:

(A) identify the variables remaining constant, the variables being manipulated, and the variables responding in an investigation in environmental science; and

(B) choose an experimental design to test an hypothesis in environmental science.

(10) Application of science in daily life. The student shall be provided opportunities to:

(A) analyze human dependence on the environment; and

(B) evaluate the applications and career implications of environmental science principles and the findings of research.

(n) Laboratory management (½-1 unit). Laboratory management shall be a laboratory-oriented course and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:

(A) demonstrate the safe use of laboratory chemicals and equipment; and

(B) demonstrate proper investigative laboratory techniques.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe student laboratory activities; and

(B) study safety hazards encountered by students and methods of eliminating the hazards.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify student manipulative equipment and supplies according to similarities and differences; and

(B) sequence a student laboratory activity.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) communicate laboratory and safety directions; and

(B) interpret meaningful arrangements of student data.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) quantify student laboratory information; and

(B) plot data on graphs and other displays.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:

(A) predict the outcome of student activities from trends in data; and

(B) formulate a student hypothesis from a laboratory investigation.

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to compare and contrast student data.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to clarify the operational definitions used in explaining laboratory procedures.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to identify the variables remaining constant, the variables being manipulated, and the variables responding in a laboratory investigation.

(10) Application of science in daily life. The student shall be provided opportunities to:

(A) apply skills of laboratory management; and

(B) evaluate the applications and career implications of laboratory management principles and the findings of research.

(o) Introductory biology (1 unit). Introductory biology shall be a laboratory-oriented course and shall include the following essential elements:

(1) Manipulative skills. The student shall be provided opportunities to:

(A) use laboratory/field materials and equipment (plant and animal investigation and management); and

(B) utilize materials and devices in a manner that maximizes safety and conservation (pest control and waste disposal).

(2) Rational thinking skills. The student shall be provided opportunities to:

(A) organize thought processes which will contribute to personal well-being (medical decisions and nutrition);

(B) evaluate endorsements, advertisements, products, and services (foods, medicine, and apparel); and

(C) make logical decisions concerning the different biological characteristics of humans and their needs (air and water quality, genetics, and physical impairments).

(3) Science knowledge. The student shall be provided opportunities to:

(A) acquire biological information to maintain the individual's well-being (human body systems; diseases: prevention, symptoms, and treatment; and plant and animal systems: vascular and life cycles);

(B) acquire biological principles and concepts that apply to a consumer (food: acquisition, preparation, and preservation; cosmetics; and ecology); and

(C) acquire scientific information related to technology and society from historical and contemporary points of view (cell theory, photosynthesis, vaccines, and environmental quality).

(4) Applications of sciences. The student shall be provided opportunities to:

(A) consider the consequences of personal actions (pollution, health practices, and products and services);

(B) evaluate biology-related career choices as being of value to self and society (financial and service goals, opportunities for career advancements, and working conditions);

(C) develop a sense of satisfaction in pursuing personal interests (human body needs: exercise and relaxation; plant and animal care); and

(D) apply biological knowledge in a manner that results in optimum benefit for society (research participation in public affairs, and public service).

(p) Introductory physical science (1 unit). Introductory physical science shall be a laboratory-oriented course and shall include the following essential elements:

(1) Manipulative skills. The student shall be provided opportunities to:

(A) acquire competencies essential for handling selected materials to accomplish personal goals;

(B) acquire competencies in the use of materials applicable to a variety of physics and chemistry careers (technicians and skilled trades);

(C) develop skills essential for using and maintaining the technological materials and devices encountered as a consumer;

(D) acquire physics- and chemistry-related skills that provide enjoyment in recreational and avocational activities; and

(E) develop skills in using materials and devices in a manner that minimizes danger to self and to society and maintains an acceptable level of erosion of the environment (safety practices and waste disposal).

(2) Rational thinking skills in science. The student shall be provided opportunities to:

(A) organize thought processes to accomplish goals (applications of electronics and photography);

(B) evaluate physics and chemistry career choices and prerequisites;

(C) evaluate endorsements, advertisements, products, and services (photography equipment, electronic equipment, and appliances);

(D) make logical decisions concerning the wise use of leisure time and materials (amateur radio and model aircraft); and

(E) adjust constructively to variations in needs resulting from individual differences that exist both within and among cultures in a healthy society.

(3) Science knowledge. The student shall be provided opportunities to:

(A) discuss scientific information needed to maintain mental and physical health to achieve fulfillment in the environment;

(B) evaluate information concerning the kinds of physics- and chemistry-related careers available and their prerequisites;

(C) use physics and chemistry principles and concepts to make reasonable technological applications to the materials and devices encountered in daily life (appliances, modes of transportation, and sporting equipment);

(D) develop physical science knowledge and pursuit of personal interests during free time (model building and home maintenance); and

(5) identify information concerning the interactions of science, technology, and society from historical and contemporary perspectives.

(4) Applications of science. The student shall be provided opportunities to:

(A) develop belief and confidence in self to control part of the environment;

(B) perceive physics- and chemistry-related career choices as being of value to self and society (technicians and skilled trades);

(C) consider the consequences of personal actions (safety and chemical disposal);

(D) develop a sense of personal worth in doing things for pleasure as well as in doing for others (hobbies); and

(E) acquire awareness and a sense of desirability of applying scientific knowledge in a manner that results in optimum benefit for people (energy sources and conservation).

(q) Aerospace-aviation education I (ground school—½-1 unit). Aerospace-aviation education I shall be a laboratory-oriented course and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:

(A) demonstrate the safe use of equipment and materials; and

(B) demonstrate investigative procedures and techniques.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe aerospace phenomena that occur in ordinary flight;

(B) explore factors that affect a science process used in flight; and

(C) observe the different physical forms of aircraft.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify flight instruments; and

(B) classify aircraft functions by their physical forms.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) describe the differing power plants used in aircraft;

(B) describe the application of vectors used in navigation; and

(C) describe the effects of the control surfaces on the motion of the aircraft.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) measure the effects of different load placements;

(B) measure navigational properties (air speed, ground speed, and azimuth); and

(C) plot data on graphs and other displays.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:

(A) predict time of flight for a trip;

(B) predict the fuel consumption per hour;

(C) predict the outcome of a control movement; and

(D) predict wind vector, drift, heading, and speed determinations.

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to:

(A) analyze scale model of aircraft;

(B) compare subsonic flight to supersonic flight; and

(C) contrast the types of cabin instruments.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to:

(A) clarify aircraft maneuvers using operational definitions; and

(B) demonstrate the use of electronic communication in aircraft.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to identify the variables remaining constant, the variables being manipulated, and the variables responding in an investigation in aerospace-aviation education.

(10) Application of science in daily life. The student shall be provided opportunities to:

(A) evaluate the design of different aircraft for differing applications;

(B) analyze the effect of speed and load on fuel consumption rate;

(C) evaluate the applications of power plant and airframe research in aircraft capabilities; and

(D) evaluate the applications and career implications of aerospace-aviation principles and the findings of research.

(r) Aerospace-aviation education II (advanced academic classroom laboratory and flight experience—½-1 unit). Aerospace-aviation education II shall be a laboratory-oriented course and shall include the following essential elements:

(1) Manipulative laboratory skills. The student shall be provided opportunities to:

(A) demonstrate the safe use of advanced-level equipment and materials;

(B) demonstrate advanced-level investigative procedures and techniques; and

(C) demonstrate knowledge of F.A.A. regulations.

(2) The use of skills in acquiring data through the senses. The student shall be provided opportunities to:

(A) observe aerospace and meteorological phenomena; and

(B) explore aerodynamic theories;

(C) observe the different types of cabin instruments; and

(D) explore maneuver analysis.

(3) The use of classification skills in ordering and sequencing data. The student shall be provided opportunities to:

(A) classify problems of air navigation; and

(B) classify communication systems.

(4) Experience in oral and written communication of data in appropriate form. The student shall be provided opportunities to:

(A) describe emergency procedures;

(B) describe air traffic patterns; and

(C) contrast the effects of meteorological conditions.

(5) Experience in concepts and skills of measurement using relationships to standards. The student shall be provided opportunities to:

(A) identify the science principles used in selected instruments; and

(B) measure aerodynamic characteristics of differing airframes.

(6) The use of skills in drawing logical inferences, predicting outcomes, and forming generalized statements. The student shall be provided opportunities to:

(A) analyze meteorologic maps for trip planning;

(B) plot data on graphs and charts; and

(C) predict fuel consumption considering load, air speed, and aircraft design.

(7) Experience in skills in relating objects and events to other objects and events. The student shall be provided opportunities to:

(A) contrast output of various aircraft power plants;

(B) compare instrument settings for various geographical locations;

(C) analyze radio navigation systems; and

(D) contrast takeoffs and landings on various strip surfaces.

(8) Experience in applying defined terms based on observations. The student shall be provided opportunities to:

(A) clarify instrumentation applications using operational definitions;

(B) demonstrate aircraft maneuvers using operational definitions; and

(C) demonstrate or simulate cross-country flight.

(9) Experience in identifying and manipulating the conditions of investigations. The student shall be provided opportunities to:

(A) identify the variables remaining constant, the variables being manipulated, and the variables responding in aerospace-aviation investigations; and

(B) manage an experimental apparatus to test an aerospace-aviation hypothesis.

(10) Application of science in daily life. The student shall be provided opportunities to:

(A) evaluate recovery procedures from unusual altitudes;

(B) analyze maximum performance takeoffs and climbs;

(C) evaluate precision approaches to airfields;

(D) evaluate the procedure for obtaining assistance via radio; and

(E) evaluate the applications and career implications of aerospace-aviation principles and the findings of research.

NOTE: All science courses in §75.64 of this chapter shall be laboratory oriented (i.e., a minimum of 40 percent of the instructional time is devoted to student laboratory/field activities exclusive of teacher demonstrations).

§75.65 *Health.*

(a) Health education (½ unit). Health education shall include the following essential elements:

(1) Concepts and skills that foster individual personal health and safety. The student shall be provided opportunitites to:

(A) understand the care of body systems and their functions;

(B) relate personal behavior to wellness;

(C) develop patterns of food selection that contribute to wellness;

(D) demonstrate responsible behavior concerning alcohol, tobacco, and other drugs;

(E) exhibit skills in accident prevention, injury control, and emergency action;

(F) understand responsible behavior and the interrelationship of diet, exercise, rest, and recreation; and

(G) identify components of a comprehensive accident prevention program.

(2) Health-related concepts and skills that involve interaction between individuals. The student shall be provided opportunities to:

(A) analyze messages of advertising for health products and services;

(B) investigate the causes, symptoms, prevention, and treatment of communicable and noncommunicable diseases, including sexually transmitted diseases;

(C) demonstrate responsible behavior in prevention and control of diseases and promotion of health; and

(D) demonstrate knowledge of the fundamentals of emergency care for persons choking or not breathing.

(3) Health-related concepts and skills that affect the well-being of people collectively. The student shall be provided opportunities to:

(A) recognize that an environment in ecological balance enhances personal well-being;

(B) be aware of community health resources and activities;

(C) identify the roles of individuals, the family, community health departments, and the medical profession in controlling sexually transmitted diseases;

(D) describe the wide range of resources designed to protect and promote the well-being of people; and

(E) investigate current health issues.

(b) Advanced health education (½ unit). Advanced health education shall include the following essential elements:

(1) Concepts and skills that foster individual personal health and safety. The student shall be provided opportunities to:

(A) emphasize health as a personal priority;

(B) practice critical thinking and rational problem solving;

(C) relate personal health to personal, educational, and professional achievement;

(D) investigate current health and safety issues; and

(E) recognize the roles of health and safety occupations in society.

(2) Health-related concepts and skills that involve interaction between individuals. The student shall be provided opportunities to:

(A) use a systematic approach to acquire health information;

(B) improve skills in assessment of the value of health products and services;

(C) relate giving and receiving love and maintaining friendships to consideration for the well-being of others and to personal well-being;

(D) project the effects of personal choices on the quality of life, now and in the future; and

(E) demonstrate skills in first aid and aid to persons choking or not breathing.

(3) Health-related concepts and skills that affect the well-being of people collectively. The student shall be provided opportunities to:

(A) describe the wide range of resources designed to protect and promote the well-being of groups of people;

(B) use systematically acquired, comprehensive health information while making choices that affect personal health and the health of society; and

(C) identify the roles of individuals, the family, community health departments, and the medical profession in controlling sexually transmitted diseases.

§75.66 *Physical Education.*

(a) Physical education I, II (½-1 unit). Physical education I and II shall include the following essential elements.

(1) Knowledge and motor skills basic to efficient movement. The student shall be provided opportunities to:

(A) analyze, review, and improve movement skills basic to the activity being taught;

(B) practice efficient movement; and

(C) improve skills necessary for successful participation in physical activities.

(2) Rules, knowledge, and skills basic to proficient participation in physical recreation activities and individual, dual, and team sports. The student shall be provided opportunities to:

(A) participate in voluntary intramural sports;

(B) learn skills, rules, strategies, officiating techniques, protocol, and safety practices appropriate to individual, dual, and team sports; and

(C) continue development and practice of behavior reflective of good sportsmanship.

(3) Motivation and development of a high level of knowledge and fitness and the ability to maintain this level. The student shall be provided opportunities to:

(A) participate daily in fitness and conditioning activities that develop total fitness; and

(B) participate in physical fitness testing and appraisal.

(4) Knowledge and skills for leisure and lifetime sports activities. The student shall be provided opportunities to:

(A) learn physical recreational and leisure time use of resources available in the community; and

(B) participate in varied physical activities that could be continued throughout life.

(b) Physical education III, IV (½-1 unit). Physical education III and IV shall include the following essential elements:

(1) Knowledge and motor skills basic to efficient movement. The student shall be provided opportunities to develop advanced skills for safe and successful participation in individual and team sports.

(2) Motivation, skills, and related conditioning activities for physical fitness. The student shall be provided opportunities to continue development, maintenance, and understanding of physical fitness.

(3) Knowledge and skills for leisure and lifetime sports activities. The student shall be provided opportunities to:

(A) develop skills in family and physical recreation activities;

(B) gain skill in individual, dual, and team sports; and

(C) participate in a program planned to meet a wide range of individual interest.

§75.67 *Fine Arts.*

(a) Art I (½-1 unit). Art I shall include the following essential elements:

(1) Awareness and sensitivity to natural and man-made environments. The student shall be provided opportunities to:

(A) examine a variety of objects;

(B) explore elements (line, value, texture, color, form, and space); and

(C) apply principles (unity, emphasis, balance, variety, movement, and proportion).

(2) Inventive and imaginative expression through art materials and tools. The student shall be provided opportunities to:

(A) design, develop, and create original artworks; and

(B) work in art areas of design, drawing, painting, printmaking, and sculpture.

(3) Understanding and appreciation of self and others through art culture and heritage. The student shall be provided opportunities to:

(A) appreciate art (contemporary and of the past); and

(B) see art and artists (visitations and visuals).

(4) Aesthetic growth through visual discrimination and judgment. The student shall be provided opportunities to:

(A) evaluate artwork of students and major artists; and
(B) apply aesthetic judgments.

(b) Art II (½-1 unit). Art II shall include the following essential elements:

(1) Awareness and sensitivity to natural and man-made environments. The student shall be provided opportunities to:

(A) examine a variety of objects;
(B) explore elements (line, value, texture, color, form, and space); and
(C) apply principles (unity, emphasis, balance, variety, movement, and proportion).

(2) Inventive and imaginative expression through art materials and tools. The student shall be provided opportunities to:

(A) design, develop, and create original artworks; and
(B) select from the following art areas:
(i) drawing;
(ii) painting;
(iii) printmaking;
(iv) fibers;
(v) ceramics;
(vi) sculpture;
(vii) jewelry; and
(viii) photography/filmmaking.

(3) Understanding and appreciation of self and others through art culture and heritage. The student shall be provided opportunities to:

(A) appreciate art (contemporary and of the past); and
(B) see art and artists (visitations and visuals).

(4) Aesthetic growth in art through visual discrimination and judgment. The student shall be provided opportunities to:

(A) evaluate artwork of students and major artists; and
(B) apply aesthetic judgments.

(c) Art III (½-1 unit). Art III shall include the following essential elements:

(1) Awareness and sensitivity to natural and man-made environments. The student shall be provided opportunities to:

(A) examine a variety of objects;
(B) explore elements (line, value, texture, color, form, and space); and
(C) apply principles (unity, emphasis, balance, variety, movement, and proportion).

(2) Inventive and imaginative expression through art materials and tools. The student shall be provided opportunities to:

(A) design, develop, and create original artworks; and
(B) select from the following art areas:
(i) drawing;
(ii) painting;
(iii) printmaking;
(iv) fibers;
(v) art appreciation/history;
(vi) ceramics;
(vii) sculpture;
(viii) jewelry;
(ix) commercial art; and

(x) photography/filmmaking.

(3) Understanding and appreciation of self and others through art culture and heritage. The student shall be provided opportunities to:

(A) examine art history (contemporary and of the past); and

(B) see art and artists (visuals and visitations).

(4) Aesthetic growth through visual discrimination and judgment. The student shall be provided opportunities to:

(A) evaluate artwork of students and major artists; and

(B) apply aesthetic judgments.

(d) Art IV (½-1 unit). Art IV shall include the following essential elements:

(1) Awareness and sensitivity to natural and man-made environments. The student shall be provided opportunities to:

(A) examine a variety of objects;

(B) explore elements (line, value, texture, color, form, and space); and

(C) apply principles (unity, emphasis, balance, variety, movement, and proportion).

(2) Inventive and imaginative expression through art materials and tools. The student shall be provided opportunities to:

(A) explore individual directions through the design, development, and creation of original artworks;

(B) select from the following art areas:

(i) drawing;

(ii) painting;

(iii) printmaking;

(iv) fibers;

(v) ceramics;

(vi) sculpture;

(vii) jewelry;

(viii) commercial art; and

(ix) photography/filmmaking; and

(C) prepare for professional development.

(3) Understanding and appreciation of self and others through art culture and heritage. The student shall be provided opportunities to:

(A) examine art history (contemporary and of the past);

(B) see art and artists (visuals and visitations); and

(C) explore art careers.

(4) Aesthetic growth through visual discrimination and judgment. The student shall be provided opportunities to:

(A) evaluate artwork; and

(B) apply art criticism.

(e) Theatre arts I (½-1 unit). Theatre arts I shall include the following essential elements:

(1) Expressive use of the body and voice. The student shall be provided opportunities to:

(A) develop relaxation and preparatory techniques;

(B) utilize pantomime;

(C) practice stage movement; and

(D) develop voice and diction.

(2) Acting concepts and skills. The student shall be provided opportunities to:

(A) utilize improvisation;

(B) understand dramatic structure;

(C) analyze and interpret scripts; and
(D) analyze and interpret characters.

(3) Theatre production concepts and skills. The student shall be provided opportunities to:
(A) recognize the interdependence of all theatrical elements; and
(B) explore technical theatre.

(4) Aesthetic growth through appreciation of theatrical events. The student shall be provided opportunitites to:
(A) develop an appreciation of theatre;
(B) practice audience etiquette;
(C) attend live theatrical events; and
(D) analyze and evaluate theatrical experiences.

(f) Theatre arts II, III, IV (scope and sequence to be determined locally) (½-1 unit). Theatre arts II, III, IV shall include the following essential elements:

(1) Acting concepts and skills. The student shall be provided opportunities to:
(A) utilize advanced characterization;
(B) explore classical production styles;
(C) explore contemporary production styles; and
(D) recognize career opportunities.

(2) Theatre production concepts and skills. The student shall be provided opportunities to:
(A) explore specialized theatrical styles (mime, dance drama, theatre for children, musical theatre, puppetry, masked theatre, radio, television, and film);
(B) develop directing techniques;
(C) develop playwriting techniques; and
(D) recognize career opportunities.

(3) Aesthetic growth through appreciation of theatrical events. The student shall be provided opportunities to:
(A) attend live theatrical events; and
(B) analyze and evaluate theatrical experiences.

(g) Technical theatre I, II (scope and sequence to be determined locally) (½-1 unit). Technical theatre I, II shall include the following essential elements:

(1) Theatre production concepts and skills. The student shall be provided opportunities to:
(A) develop stagecraft skills;
(B) practice theatre safety;
(C) explore scenery;
(D) explore properties;
(E) explore lighting;
(F) explore costumes;
(G) explore makeup;
(H) explore sound;
(I) explore public relations;
(J) research and design; and
(K) recognize career opportunities.

(2) Aesthetic growth through appreciation of theatrical events. The student shall be provided opportunities to:
(A) attend live theatrical events; and
(B) analyze and evaluate theatrical experiences.

(h) Theatre production I, II, III, IV (½-1 unit). Theatre production I, II, III, IV shall include the following essential elements:

(1) Acting concepts and skills. The student shall be provided opportunities to:

(A) audition;

(B) rehearse;

(C) perform in public; and

(D) recognize career opportunities.

(2) Theatre production concepts and skills. The student shall be provided opportunities to:

(A) research and design;

(B) work on technical crews;

(C) perform in public;

(D) participate in strike of set, lights, etc.;

(E) recognize career opportunities; and

(F) practice theatre safety.

(3) Aesthetic growth through appreciation of theatrical events. The student shall be provided opportunities to:

(A) develop an appreciation of theatre;

(B) practice audience etiquette;

(C) attend live theatrical events; and

(D) analyze and evaluate theatrical experiences.

(i) Band I, II, III, IV (½-1 unit). Band I, II, III, IV shall include the following essential elements:

(1) Mental and physical discipline. The student shall be provided opportunities to:

(A) develop powers of concentration;

(B) memorize music;

(C) prepare and practice individual parts;

(D) develop self- and group-discipline; and

(E) memorize marching drills (if offered).

(2) Citizenship through group endeavor. The student shall be provided opportunities to:

(A) develop leadership abilities;

(B) develop responsibility;

(C) develop ability to cooperate with others and to work as a team member; and

(D) develop diligence.

(3) Physical conditioning. The student shall be provided opportunities to:

(A) develop strength, stamina, and endurance; and

(B) develop coordination.

(4) Cultural growth. The student shall be provided opportunities to attain a knowledge of music history and band literature through performance.

(5) Ability to make musical value judgments through critical listening. The student shall be provided opportunities to recognize quality of sound, pitch, style, tempo, rhythm, blend, balance, phrasing, dynamics, and articulation.

(6) Music theory. The student shall be provided opportunities to:

(A) know and use note values and rests;

(B) know and use keys, key signatures, and scales;

(C) know and use musical terms, signs, and symbols;

(D) recognize and tune intervals and harmony; and

(E) train the ear.

(7) Proper instrumental technique. The student shall be provided opportunities to:

(A) care for the instrument;

(B) assume correct posture and playing position:
(C) develop the embouchure;
(D) develop good tone;
(E) breathe properly;
(F) develop technical proficiency (fingering, articulation, etc.); and
(G) develop rhythmic skills.

(8) Creative self-expression. The student shall be provided opportunities to:
(A) express oneself in every performance experience; and
(B) explore careers.

(j) Orchestra I, II, III, IV (½-1 unit). Orchestra I, II, III, IV shall include the following essential elements:

(1) Care and handling of instruments. The student shall be provided opportunities to minimize damage through proper techniques of storage, transportation, and preparation for use.

(2) Posture and playing position. The student shall be provided opportunities to assume correct posture and playing position while sitting or standing and at rest.

(3) Instrumental technique. The student shall be provided opportunities to:
(A) develop tone and intonation;
(B) develop right and left hand techniques;
(C) develop rhythmic skills;
(D) develop ability to phrase musically;
(E) develop dynamic control;
(F) develop breath control; and
(G) develop articulation.

(4) Music reading skills. The student shall be provided opportunities to:
(A) develop eye-hand coordination; and
(B) interpret in actual sound musical symbols and terms from the printed page.

(5) Musical sensitivity through performance and listening. The student shall be provided opportunities to internalize generally accepted, authentic performance styles and techniques in music played and heard.

(6) Evaluation of musical performance quality. The student shall be provided opportunities to:
(A) evaluate progress toward self-established musical goals;
(B) evaluate solo and group rehearsals and performances; and
(C) recognize quality of sound, pitch, style, tempo, rhythm, blend, balance, phrasing, dynamics, and articulation.

(7) Creative self-expression. The student shall be provided opportunities to:
(A) express oneself in every performance experience; and
(B) explore careers.

(k) Choral music I, II, III, IV (½-1 unit). Choral music I, II, III, IV shall include the following essential elements:

(1) Study of vocal techniques. The student shall be provided opportunities to:
(A) breathe correctly for singing;
(B) produce good vocal tone;
(C) sing with good diction; and
(D) develop the voice.

(2) Study of choral techniques. The student shall be provided opportunities to:
(A) achieve choral balance and blend;
(B) achieve good intonation and tone quality;
(C) achieve rhythmic accuracy; and
(D) achieve expressive, artistic interpretation of the composer's intent.

(3) Music theory. (Depth of study to be related to difficulty and sophistication of music performed). The student shall be provided opportunities to:

(A) know and use the great staff;

(B) know and use pitch and rhythmic notation;

(C) know and use key and time signatures;

(D) know and use musical symbols;

(E) observe dynamic markings; and

(F) train the ear.

(4) Sight-singing method or program. The student shall be provided opportunities to utilize an ongoing method or program to increase proficiency in reading music.

(5) Music history and literature. The student shall be provided opportunities to:

(A) experience and discuss a variety of choral styles, eras, and composers through music studied and performed; and

(B) listen critically to live and recorded performances.

(6) Performance activities. The student shall be provided opportunities to perform individually, in small ensembles, and in large groups.

(7) Creative self-expression. The student shall be provided opportunities to:

(A) express oneself in every performance activity; and

(B) explore careers.

(l) Stage band I, II, III, IV (½-1 unit). Stage band I, II, III, IV shall include the following essential elements:

(1) Reinforcement of essential elements of band and orchestra. The student shall be provided opportunities to:

(A) develop proper instrumental technique;

(B) learn and use basic music theory;

(C) read music;

(D) achieve mental and physical discipline;

(E) achieve good physical conditioning;

(F) develop citizenship;

(G) grow in cultural awareness;

(H) learn proper instrument care;

(I) judge performance quality;

(J) express oneself in music; and

(K) evaluate musical progress and quality.

(2) Jazz styles and rhythms. The student shall be provided opportunities to:

(A) explore, study, and perform alternative techniques utilized in American jazz and jazz-derived musical idioms; and

(B) recognize heightened responsibility of the individual player for performance of his or her own part.

(3) Improvisation. The student shall be provided opportunities to:

(A) create extemporaneous, original melodic and rhythmic musical lines from chord or scale symbols; and

(B) know and apply basic jazz forms such as 12-bar blues and 32-bar AABA song form.

(4) Music literature. The student shall be provided opportunities to:

(A) study and perform music from a variety of jazz eras (Dixieland, rhythm and blues, swing, bebop, jazz-rock, etc.);

(B) adapt style of playing and instrumentation to the music studied and performed; and

(C) listen critically to live and recorded performances.

(5) Composing and arranging. The student shall be provided opportunities to compose, arrange, and hear one's own musical works.

(6) Creative self-expression. The student shall be provided opportunities to:

(A) express oneself in every performance activity; and

(B) explore careers.

(m) Instrumental ensembles I, II, III, IV (½-1 unit). Instrumental ensembles I, II, III, IV shall include the following essential elements:

(1) Playing experience in a small instrumental group. The student shall be provided opportunities to:

(A) perform in ensembles with sizes and compositions different from those of the standard band and orchestra; and

(B) recognize heightened responsibility of the individual player for performance of his or her own part.

(2) Music literature. The student shall be provided opportunities to study music of a variety of styles and historical periods different from that utilized in the parent band and orchestra organization.

(3) Study of ensemble techniques. The student shall be provided opportunities to utilize methods and styles appropriate to the type of ensemble (string quartet or other chamber group, clarinet choir, wind trios and quartets, percussion ensemble, brass band, etc.).

(4) Refinement of musical and technical skills. The student shall be provided opportunities to:

(A) play with good intonation and tone quality;

(B) develop balance and blend;

(C) achieve rhythmic accuracy and musical phrasing;

(D) develop articulation, mechanism, and bowing techniques;

(E) breathe correctly; and

(F) interpret the music according to the composer's intent.

(5) Performance activities. The student shall be provided opportunities to perform ensemble music at school and in public (performance settings may vary from those in which full bands and orchestras usually play).

(6) Awareness of ensemble literature and its potential for use throughout life. The student shall be provided opportunities to recognize satisfying recreation as an adult through participation in amateur musical groups.

(7) Creative self-expression. The student shall be provided opportunities to:

(A) express oneself in every performance activity; and

(B) explore careers.

(n) Vocal ensembles I, II, III, IV (½-1 unit). Vocal ensembles I, II, III, IV shall include the following essential elements:

(1) Singing experience in a small vocal group. The student shall be provided opportunities to:

(A) perform in ensembles with sizes and compositions different from those of the standard choral music organizations; and

(B) recognize heightened responsibility of the individual singer for performance of his or her own part.

(2) Music literature. The student shall be provided opportunities to study music of a variety of styles and historical periods different from that utilized in the parent choral music organization.

(3) Study of vocal techniques. The student shall be provided opportunities to develop vocal quality, tone production, and control required by the music studied and performed.

(4) Study of ensemble techniques. The student shall be provided opportunities to utilize methods and styles appropriate to the type of vocal ensemble (madrigals, jazz choir, show choir, pop choir, trios, quartet, sextets, etc.).

(5) Performance activities. The student shall be provided opportunities to perform ensemble music at school and in public. (Performance settings may vary from those in which larger choral music groups usually sing).

(6) Awareness of ensemble literature and its potential for use throughout life. The student shall be provided opportunities to recognize satisfying recreation as an adult through participation in amateur musical groups.

(7) Creative self-expression. The student shall be provided opportunities to:

(A) express oneself in every performance activity; and

(B) explore careers.

(o) Applied music I, II (individual study—½-1 unit). Applied music I, II (individual study) shall include the following essential elements:

(1) Private study. The student shall be provided opportunities to:

(A) study the chosen instrument or voice in a one-to-one student/teacher relationship (not in a class); and

(B) observe course and administrative requirements as outlined in the Texas Education Agency publication *Applied Music (Individual Study)*.

(2) Study of solo literature. The student shall be provided opportunities to:

(A) study and memorize three solo selections from more than one musical style and historical period; and

(B) accept assignments made on an individualized basis for optimal progress in style and interpretation.

(3) Study of technical literature. The student shall be provided opportunities to:

(A) study études;

(B) memorize scales; and

(C) accept assignments made on an individualized basis for optimal progress in performance skills and facility.

(4) Performance examination. The student shall be provided opportunities to submit a performance examination (memorized solo selections and prepared technical literature and scales) to qualified examiners chosen by the school, for grade and credit.

(p) Music theory I (½-1 unit). Music theory I shall include the following essential elements:

(1) Basic pitch and rhythmic notation. The student shall be provided opportunities to:

(A) know and use the lines and spaces of the great staff;

(B) know and use pitch and rhythmic notation;

(C) know and use key and time signatures; and

(D) know and use musical clefs, signs, and symbols.

(2) Scale structures. The student shall be provided opportunities to:

(A) understand and apply the whole- and half-step patterns of major and minor scales; and

(B) understand derivations of key signatures.

(3) Intervals. The student shall be provided opportunities to identify perfect, major, minor, diminished, and augmented intervals by sight and sound.

(4) Chord structure and movement. The student shall be provided opportunities to:

(A) construct major and minor triads;

(B) identify major and minor triads by sight and sound; and

(C) understand the ways in which major and minor triads progress in relation to each other.

(5) Simple partwriting. The student shall be provided opportunities to:

(A) construct and connect chords with root in bass and triad in treble clef; and

(B) analyze resulting and similar chord progressions.

(6) Ear training. The student shall be provided opportunities to:

(A) take simple melodic and rhythmic dictation; and

(B) practice sight singing.

(q) Music theory II (½-1 unit). Music theory II shall include the following essential elements:

(1) Review and refinement of materials covered in music theory I. The student shall be provided opportunities to utilize basic pitch and rhythmic notation, scale structures, intervals, chord structure and movement, simple partwriting, and ear training.

(2) Advanced chord structure. The student shall be provided opportunities to construct and study inversions, augmented and diminished chords, seventh chords, and cadences.

(3) Harmonization. The student shall be provided opportunities to harmonize simple melodic lines in four parts using root positions and inversions.

(4) Ear training. The student shall be provided opportunities to:

(A) take melodic, rhythmic, and harmonic dictation, including nonharmonic tones; and

(B) practice sight singing.

(5) Form and analysis. The student shall be provided opportunities to:

(A) study simpler musical forms; and

(B) analyze types of chord structures and progressions previously constructed, studied, and written.

(6) Composition. The student shall be provided opportunities to compose and hear original works for available instruments or voices or both.

(r) Music history and literature (½-1 unit). Music history and literature shall include the following essential elements:

(1) Works from the major historical periods of music. The student shall be provided opportunities to hear and briefly study selected works from the Renaissance, Baroque, Classical, Romantic, Impressionistic, Modern, and Contemporary periods.

(2) Composers. The student shall be provided opportunities to explore through more intensive study the works and lives of selected composers from the major historical periods of music.

(3) Musical style. The student shall be provided opportunities to become aware of treatments of melody, harmony, rhythm, form, and performance media that result in individuality and effect of musical works.

(4) Musical form. The student shall be provided opportunities to:

(A) understand how musical structures are lengthened and unified through repetition, contrast, and variation;

(B) compare varied treatments of the same forms by different composers; and

(C) explore long and short forms.

(5) Relationship of music to history. The student shall be provided opportunities to understand the relationships of musical works, composers, forms, and styles to the political and social events of their musical and historical periods.

§75.68 *Social Studies, Texas and United States History.*

(a) Social studies attitudes, values, and skills for citizenship. All social studies courses shall include the essential elements as appropriate to each course for social studies attitudes, values, and skills for citizenship as described in §75.48(a) of this title (relating to Social Studies, Texas and United States History).

(b) United States history (from Reconstruction to the present—1 unit). United States history shall include the following essential elements:

(1) Emergence of the United States as a world power. The student shall be provided opportunities to:

(A) describe the causes and effects of United States involvement in foreign affairs and in international conflicts;

(B) describe the United States international political, humanitarian, economic, and military cooperative efforts; and

(C) analyze the foreign policies of the United States and their impact on the nation.

(2) Geographic influences on the historical development of the United States. The student shall be provided opportunities to:

(A) describe how population movements and patterns of settlement in the United States were influenced by physical features;

(B) identify major United States population centers and their importance;

(C) identify former United States overseas possessions and explain their present status;

(D) describe the national government land policies and their historical significance;

(E) locate and explain the importance of selected historical sites;

(F) examine the uses, abuses, and preservation of natural resources and the physical environment of the United States; and

(G) understand how geographic patterns of economic resources influenced the development of the United States.

(3) Economic development and growth of the United States. The student shall be provided opportunities to:

(A) understand the development of the United States banking system;

(B) analyze the impact of new developments in science and technology on business, industry, and agriculture;

(C) explain the economic impact of various wars on the United States;

(D) explain the development and importance of new business and labor organizations;

(E) identify significant business, industrial, and labor leaders of the United States;

(F) understand the impact of business cycles, deflation, and inflation on the United States;

(G) describe the overseas expansion of United States trade; and

(H) analyze the changing relationship of government and the economy.

(4) Social and cultural developments of the United States. The student shall be provided opportunities to:

(A) describe the long-term social impact of the Civil War and Reconstruction;

(B) explain the causes for and impact of immigration;

(C) recognize the contributions of ethnic and racial groups and individuals to the growth and development of the United States;

(D) analyze majority-minority group relations;

(E) describe population movements and patterns of settlement;

(F) identify social reform movements, leaders, issues, and results;

(G) analyze the impact of science and technology on social and cultural developments; and

(H) describe developments in art, music, literature, drama, and other culturally related activities.

(5) Political development of the United States. The student shall be provided opportunities to:

(A) describe the long-term political effects of the Civil War and Reconstruction;

(B) analyze the major historical documents that relate to the development of the United States;

(C) describe major political campaigns, elections, issues, and leaders;

(D) understand major political reform movements, leaders, issues, and results;

(E) evaluate constitutional developments reflected by amendments and court interpretations; and

(F) analyze the growth and development of the three branches of federal government.

(c) World history studies (1 unit). World history studies shall include the following essential elements:

(1) Development of early civilizations. The student shall be provided opportunities to:

(A) analyze early river valley civilizations;

(B) describe the historical development of Greek and Roman societies and their contributions to modern civilization; and

(C) trace the development of early Indian and Chinese civilizations.

(2) Historical development of Western civilization. The student shall be provided opportunities to:

(A) trace the development of Judaism, Christianity, and Islam and their influences;

(B) describe political, economic, and social changes that occurred during the Medieval periods, the Renaissance, and the Reformation;

(C) analyze the influences of Byzantine and Moslem societies on Western civilization;

(D) explain the impact of the Renaissance and Reformation on Europe;

(E) describe the expansion of European influence around the world through exploration, investment, and colonization;

(F) analyze the impact of political and economic revolutions on Western civilization, including the increased productivity and prosperity resulting from the industrial revolution;

(G) explain the rise of nationalism and imperialism and their consequences;

(H) trace the origins of and basis for the concepts of liberty, individual freedom, private property rights, and representative government; and

(I) trace the development of capitalism, socialism, and communism.

(3) Historical development of other regions. The student shall be provided opportunities to:

(A) trace the development of national unity in Russia, India, Japan, and China;

(B) understand the development of Mayan, Aztec, and Incan civilizations in the Americas;

(C) describe the emergence of nation-states in the Middle East, Latin America, Africa, and Asia, noting political perspectives; and

(D) explain the rise of nationalism and imperialism among eastern bloc nations and their consequences.

(4) Geographic influences on world history. The student shall be provided opportunities to:

(A) identify major colonies around the world at various historical periods and explain reasons for their colonization;

(B) determine how the physical features of an area affected its historical development;

(C) analyze the cultural and physical changes that occurred within an area studied at various periods of time;

(D) describe the growth and importance of trade, commerce, transportation, and communications at different times in history;

(E) locate major physical features, landforms, and countries of the world on maps and globes;

(F) describe the major physical features of the world;

(G) contrast the development of resources in countries where private property rights have been honored and where they have not;

(H) contrast differences in the productivity and living standards of countries with similar resource bases but with market economies versus restricted economies; and

(I) trace changes in technological developments relative to natural resources.

(5) Developments of the twentieth century. The student shall be provided opportunities to:

(A) explain the causes and results of World Wars I and II;

(B) describe the impact of the Great Depression on world events;

(C) analyze the development of dictatorships around the world and the hardships of life under both fascist and communist dictatorships;

(D) explain the impact of conflicting ideologies on present-day world affairs;

(E) analyze the collapse of European colonial empires and the emergence of new nations, including the attempt to replace western colonialism with soviet influence;

(F) trace the achievements in and impact of twentieth century science and technology, noting the positive impact of individual freedom and incentives of technological advancement;

(G) analyze the impact of worldwide economic interdependence on the world today;

(H) describe the emergence of space exploration and its impact on world affairs;

(I) analyze the impact of changing patterns of production and consumption of energy resources;

(J) examine the uses, abuses, and preservation of natural resources around the world;

(K) trace the adverse effects that communism, socialism, and fascism have had on individual freedom and liberty;

(L) explain the positive aspects and effects of American capitalism upon the world; and

(M) explain the soviet stated goal of world communism and the growth of soviet influence and ideology around the globe.

(d) World geography studies (1 unit). World geography studies shall include the following essential elements:

(1) Nature of geography. The student shall be provided opportunities to:

(A) compare physical and cultural geography;

(B) explain geographical terminology; and

(C) describe geographical tools and methodologies.

(2) Physical setting of the earth. The student shall be provided opportunities to:

(A) locate and describe major landforms and features of the earth;

(B) describe the physical forces that alter the features of the earth's crust;

(C) describe the physical setting of selected regions;

(D) locate the major natural resources of the world and give their uses; and

(E) locate the major nations and regions of the world.

(3) Interaction of physical environments. The student shall be provided opportunities to:

(A) understand criteria for determining regions;

(B) analyze the impact of environment on ways of life in a region;

(C) describe major economic activities in a region;

(D) determine the economic, social, and cultural interchange among regions and countries;

(E) explain the causes of population patterns, densities, and movements;

(F) analyze forces that are causing changes in the landscapes of regions and countries;

(G) explain the economic importance of water and other natural resources to regions and countries;

(H) determine kinds and sources of energy for regions and countries;

(I) describe the agricultural base of regions; and

(J) examine uses, abuses, and preservation of natural resources and the physical environment.

(4) Urban analysis. The student shall be provided opportunities to:

(A) analyze the site and situation of cities;

(B) describe functions of cities;

(C) understand patterns of urban growth;

(D) analyze movements of people, goods, and services in an urban environment; and

(E) analyze environmental issues associated with urban growth.

(e) United States government (½ unit). United States government shall include the following essential elements:

(1) Foundations of the United States political system. The student shall be provided opportunities to:

(A) explain reasons governments are established;

(B) analyze the differences between direct and representative democracy;

(C) compare United States political institutions, processes, and values with other governmental systems;

(D) trace political ideas from the Ancient World, Western Europe, and the 13 colonies that formed the foundation of the United States system of government;

(E) trace the growth of the two-political party system in the United States; and

(F) analyze major historical documents relating to the political development of the United States.

(2) Development of the United States governmental system. The student shall be provided opportunities to:

(A) analyze the purposes and political and economic philosophies of the United States Constitution, Bill of Rights, and Declaration of Independence;

(B) recognize significant individuals who played important roles in establishing the government of the United States;

(C) analyze the impact of Supreme Court decisions on the American governmental system; and

(D) explain due process of law.

(3) Structures and functions of the United States governmental systems. The student shall be provided opportunities to:

(A) describe the structures and functions of governments at federal, state, and local levels;

(B) identify executive, legislative, and judicial authority roles on national, state, and local levels;

(C) understand the taxing and spending functions of national, state, and local levels of government and the impact of these functions; and

(D) analyze techniques for maintaining a division of power among branches of government and between national and state levels.

(4) Participation and decision making in civic affairs. The student shall be provided opportunities to:

(A) examine factors that influence an individual's political beliefs and behavior;

(B) understand the functions of political parties in the United States political process;

(C) analyze the functions of minor political parties and interest groups in the American political process; and

(D) interpret the concept that the United States has a "government of law, not men."

(f) Advanced Texas studies (½ unit). Advanced Texas studies shall include the following essential elements:

(1) History of Texas in the 20th century. The student shall be provided opportunities to:

(A) explore the effect on Texas of the closing of the frontier;

(B) recognize the roles of Texans in international conflicts;

(C) identify and explain the significance of major issues and personalities; and

(D) understand the impact of science and technology on the historical development of Texas.

(2) Political and social development of 20th-century Texas. The student shall be provided opportunities to:

(A) recognize the important political events that have occurred in Texas;

(B) identify significant individuals who affected the political and social history of the state;

(C) trace the changes in governmental institutions;

(D) describe the structures and functions of governments at the local and state levels;

(E) identify the contributions of various ethnic, cultural, and racial groups and individuals to Texas; and

(F) understand the social and cultural changes that have occurred in Texas.

(3) Economic growth of 20th-century Texas. The student shall be provided opportunities to:

(A) explore the role of the petroleum industry on the economic growth of the state;

(B) recognize the role of major industries to the economic development of Texas;

(C) understand the economic interdependence of Texas and other states and nations; and

(D) understand the impact of the farming and ranching industries on the economic growth of the state.

(4) Geographic influences on the development of Texas. The student shall be provided opportunities to:

(A) describe the major geographic features of the state;

(B) describe the influence of geography on the direction and flow of population settlement and growth;

(C) explain the importance of water resources, economically and recreationally;

(D) describe where important natural resources are found in Texas;

(E) explain causes for the continuing urbanization of Texas; and

(F) identify places of historical significance in one's community and state.

(g) American culture studies (½ unit). American culture studies shall include the following essential elements:

(1) History and contributions of selected cultural, racial, and ethnic groups. The student shall be provided opportunities to:

(A) identify cultural, racial, and ethnic groups that have settled in the United States and explain reasons for their immigration;

(B) explain the multicultural nature of the discovery, exploration, and settlement of the United States;

(C) recognize the contributions of various cultural, racial, and ethnic groups and individuals to the development and growth of the United States;

(D) understand the interaction of selected groups with individuals and groups from various religious, national, racial, and ethnic backgrounds; and

(E) trace the historical origins of selected groups.

(2) Cultures of selected cultural, racial, and ethnic groups. The student shall be provided opportunities to:

(A) identify special celebrations and events and explain their connections with cultural, racial, and ethnic groups;

(B) recognize examples of cultural borrowing that reflect the multicultural aspects of the nation;

(C) describe the art, music, literature, drama, and other culturally related activities of various groups;

(D) analyze the influences of selected groups on American culture, particularly in the Southwest;

(E) identify efforts of various groups to maintain cultural identity in relation to the dominant culture; and

(F) analyze the diverse lifestyles of groups selected for study.

(h) World area studies (½-1 unit). World area studies shall include the following essential elements:

(1) Historical developments of selected regions or countries. The student shall be provided opportunities to:

(A) trace major historical events from early beginnings to the present, emphasizing 20th-century developments;

(B) explore the interaction of selected regions or countries with other areas of the world, historically and presently; and

(C) recognize significant personalities in the development of selected regions or countries.

(2) Political and economic developments of selected regions or countries. The student shall be provided opportunities to:

(A) describe the governmental structures of selected countries;

(B) identify factors that have affected economic development;

(C) explore the impact of science, technology, and industrialization; and

(D) describe contemporary political and economic relationships with the rest of the world.

(3) Geographic aspects of selected regions or countries. The student shall be provided opportunities to:

(A) describe the physical features of the area studied;

(B) recognize the influence of geography on the historical development of area studied; and

(C) analyze population patterns and trends of selected areas.

(4) Cultural aspects of selected regions or countries. The student shall be provided opportunities to:

(A) understand the social and cultural changes that have affected lifestyles;

(B) compare and contrast variations of cultural patterns in selected regions or countries;

(C) analyze the roles of religions and traditions on shaping the cultures of an area; and

(D) identify the art, music, literature, drama, and other culturally related activities of an area.

(i) Psychology (½ unit). Psychology shall include the following essential elements:

(1) Nature of psychology. The student shall be provided opportunities to:

(A) define the fields of psychology;
(B) analyze the tools and techniques of psychology; and
(C) understand the terminology of psychology.

(2) Human growth, development, and behavior. The student shall be provided opportunities to:
(A) explain stages of human growth and development;
(B) understand factors involved in learning and language development;
(C) describe thinking and creative processes;
(D) explain motivation and emotion; and
(E) understand personality theories, disorder therapies, and personality testing and assessment.

(3) Development of the individual. The student shall be provided opportunities to:
(A) analyze the development of self-concept;
(B) understand relationships of individuals with other individuals and with groups; and
(C) establish individual long- and short-range goals.

(j) Sociology (½ unit). Sociology shall include the following essential elements:

(1) Nature of sociology. The student shall be provided opportunities to:
(A) define sociology;
(B) analyze the tools and techniques of sociology; and
(C) understand sociological terminology.

(2) Culture, socialization, groups, and institutions. The student shall be provided opportunities to:
(A) explain the processes of socialization;
(B) analyze types of groups and interactions among groups;
(C) analyze social institutions, their structures and functions;
(D) understand the roles of beliefs, mores, traditions, and folk-ways in a culture;
(E) analyze social problems in selected cultures; and
(F) analyze roles of people in various situations and relationships.

(3) Communications. The student shall be provided opportunities to:
(A) explain symbolic communications;
(B) understand impact of media on groups; and
(C) analyze forms of propaganda and propaganda techniques.

(4) Cultural development and change. The student shall be provided opportunities to:
(A) understand causes of cultural and social change;
(B) analyze the impact of science and technology upon people and cultures; and
(C) describe the effects of cultural contact and diffusion.

(k) Advanced social science problems (½ unit). Advanced social science problems shall include the following essential elements:

(1) Application of historical and social science facts, concepts, rules, and generalizations to selected topics, problems, or issues. The student shall be provided opportunities to:
(A) formulate cause/effect, summary, and value generalizations;
(B) condense information into valid summaries;
(C) question stereotypes representing inaccurate or oversimplified judgments; and
(D) apply research skills to verify the validity of rules, laws, principles, generalizations, or decisions.

(2) Democratic participatory skills. The student shall be provided opportunities to:
(A) evaluate the processes and results of decision making;
(B) apply the strategies of problem solving;
(C) express ideas in an orderly and open manner;
(D) undertake personal leadership in groups;
(E) accept leadership of others;

(F) demonstrate tolerance of differing opinions; and

(G) state and defend a point of view.

(3) Processes of reasoning. The student shall be provided opportunities to:

(A) draw inferences from data;

(B) distinguish fact from opinion;

(C) draw conclusions from data;

(D) recognize common fallacies; and

(E) identify and analyze propaganda.

(4) Analysis of information from various sources. The student shall be provided opportunities to:

(A) verify the validity of information;

(B) determine relationships between causes and effects;

(C) interpret and evaluate conflicting opinions;

(D) form valid generalizations;

(E) identify unstated assumptions; and

(F) detect bias in sources of information.

§75.69 *Economics, with Emphasis on the Free Enterprise System and its Benefits (½ unit).*

Economics with emphasis on the free enterprise system and its benefits (grades 11-12) shall include the following essential elements:

(1) American free enterprise system. The student shall be provided opportunities to:

(A) identify characteristics, benefits, and goals of the American free enterprise system;

(B) analyze how supply and demand affect prices;

(C) examine the circular flow of economic activity;

(D) relate the business cycle, deflation, and inflation with economic conditions;

(E) analyze the roles of economic incentives, voluntary exchanges, private property rights, and competition;

(F) understand the role of business in the American free enterprise system;

(G) examine the roles of labor and consumers in the American free enterprise system;

(H) relate the price mechanism to allocation of resources and distribution of income; and

(I) identify the factors of production and the income earned from each factor.

(2) Government in the American economic system. The student shall be provided opportunities to:

(A) understand how the government both protects and regulates the operations of the market system;

(B) examine the processes and consequences of the government's budget;

(C) examine the organization and functions of the Federal Reserve System;

(D) analyze the costs and benefits of government regulation of the market; and

(E) evaluate the economic performance of monetary and fiscal policies.

(3) American economic system and international economic relations. The student shall be provided opportunities to:

(A) compare various types of economic systems (capitalism, socialism, and communism); and

(B) examine the purposes, the extent, and the impact of world trade on the United States' economy.

(4) Consumer economics. The student shall be provided opportunities to:

(A) describe the rights and responsibilities of consumers;

(B) identify the market conditions and agencies that provide consumer protection;

(C) understand the use of credit and savings and how they affect the economy;

(D) define basic consumer terminology in the areas of credit, insurance, budgeting, and home ownership or leasing; and

(E) examine the income tax.

(5) Social studies attitudes, values, and skills for citizenship as appropriate to this course as described in §75.48(a) of this title (relating to Social Studies, Texas and United States History) are included by reference.

(a) Typewriting (½-1 unit). Typewriting shall include the essential elements in this subsection. Typewriting offered for one semester must include the elements in paragraphs (1) - (3) of this subsection. Typewriting offered for two semesters must include all of the elements in this subsection.

(1) Keyboard mastery techniques. The student shall be provided opportunities to:
  (A) position body and hands;
  (B) learn the spatial arrangement of the keyboard;
  (C) strike keys with the correct fingers; and
  (D) operate various machine parts.

(2) Speed and accuracy in keyboarding. The student shall be provided opportunities to:
  (A) read and type response patterns;
  (B) type skill-comparison writings;
  (C) control the pace of typing for accuracy;
  (D) push for higher speed goals (emphasized in both semesters); and
  (E) sustain speed on longer writings (emphasized in both semesters).

(3) Copy-arrangement skills. The student shall be provided opportunities to:
  (A) center horizontally and vertically;
  (B) tabulate in columns;
  (C) balance letters on page;
  (D) follow manuscript form for themes and reports; and
  (E) apply correction techniques.

(4) Communication skills. The student shall be provided opportunities to:
  (A) practice proofreading, spelling, and correcting errors;
  (B) punctuate sentences; and
  (C) compose at typewriter.

(5) Problem typing skills. The student shall be provided opportunities to:
  (A) apply copy-arrangement principles;
  (B) interpret and follow directions (emphasized in both semesters);
  (C) plan and complete work; and
  (D) type from rough draft and handwritten copy.

(6) Production competencies. The student shall be provided opportunities to:
  (A) make placement decisions;
  (B) organize work materials; and
  (C) produce usable copy under timed situations.

(7) Electronic information processes. The student shall be provided opportunities to discuss how the ability to operate a keyboard efficiently affects information flow.

(b) Accounting (½-1 unit). Accounting shall include the essential elements in this subsection. Accounting offered for one semester must include the elements in paragraphs (1) - (2) of this subsection. Accounting offered for two semesters must include all of the elements in this subsection.

(1) Accounting as an information system. The student shall be provided opportunities to:
  (A) learn and use the language of business;
  (B) understand the importance of accurate records;
  (C) provide financial data; and
  (D) understand the accounting equation.

(2) Processing financial data. The student shall be provided opportunities to:
  (A) understand the purposes of and procedures for recording transactions;
  (B) analyze source documents;

(C) classify, organize, and record data;
(D) follow specialized procedures of the accounting cycle; and
(E) prepare financial statements.

(3) Data processing applications. The student shall be provided opportunities to:
(A) prepare data for processing;
(B) format data for particular uses;
(C) verify output data for accuracy;
(D) relate basic steps of data cycle to steps of the accounting cycle (flowcharting); and
(E) process data electronically.

(4) Tool for management. The student shall be provided opportunities to:
(A) determine working capital;
(B) analyze financial statements;
(C) provide information for decisionmaking; and
(D) evaluate alternative solutions to business problems.

(5) Electronic information processes. The student shall be provided opportunities to discuss the use of current electronic methods of transferring funds and accessing database information as related to course content.

(c) Business data processing (½ unit). Business data processing shall include the following essential elements:

(1) Overview of computers. The student shall be provided opportunities to:
(A) learn the components of a computer system;
(B) discuss interaction of people and computers for productivity; and
(C) differentiate between computer languages.

(2) Technological changes. The student shall be provided opportunities to:
(A) develop computer-related vocabulary; and
(B) merge data processing and word processing (information processing).

(3) Computer applications. The student shall be provided opportunities to:
(A) process business, industry, and government information;
(B) explore telecommunications;
(C) show relationships to education, medicine, entertainment, and everyday living; and
(D) discuss facilitation of worldwide information processing (networking).

(4) Systems and concepts. The student shall be provided opportunities to:
(A) trace the computer cycle;
(B) identify various types of input-output media;
(C) format input and output information;
(D) store and retrieve information; and
(E) improve the decision-making process.

(5) Electronic information processes. The student shall be provided opportunities to discuss the use of current electronic methods of compiling, storing, and accessing information as related to course content.

(d) Business mathematics (½-1 unit). Business mathematics shall include the essential elements in this subsection. Business mathematics offered for one semester must include the elements in paragraphs (1) - (2) of this subsection. Business mathematics offered for two semesters must include all of the elements in this subsection.

(1) Basic mathematics skills. The student shall be provided opportunities to:
(A) refine skills and develop speed in performing calculations;
(B) develop logical approaches to solving business problems; and
(C) solve business-related metric problems.

(2) Personal business problems. The student shall be provided opportunities to:

(A) make price comparisons;

(B) determine the cost of borrowing;

(C) compare interest costs of different lending agreements;

(D) compute travel expenses, including cost of operating an automobile;

(E) differentiate between simple and compound interest on savings;

(F) calculate rate of income on bonds;

(G) cost the purchase of stocks;

(H) use an amortization table for determining monthly payments;

(I) figure property tax rate; and

(J) figure income tax when itemizing deductions.

(3) Business-related problems. The student shall be provided opportunities to:

(A) price merchandise based on both cost price and selling price;

(B) calculate payrolls;

(C) determine cost of production;

(D) calculate cost of goods sold;

(E) compute sales commissions and selling cost percentages;

(F) calculate depreciation expense; and

(G) construct graphs, charts, and tables depicting the results of business operations.

(4) Computer applications. The student shall be provided opportunities to:

(A) develop flowcharts for solving many types of data processing problems; and

(B) interpret computer printouts.

(5) Electronic information processes. The student shall be provided opportunities to discuss the use of current electronic methods of transferring funds and accessing information as related to course content.

(c) Business communications (½-1 unit). Business communications shall include the following essential elements:

(1) Communication skills. The student shall be provided opportunities to:

(A) refine basic grammar and writing skills;

(B) express thoughts logically and sequentially;

(C) apply accepted standards in capitalization, number expression, and abbreviations;

(D) expand business vocabulary with emphasis on spelling;

(E) locate, organize, and use supplementary resources;

(F) choose language, style, and format appropriate to message's purpose and audience; and

(G) adhere to the characteristics of good communications.

(2) Listening skills. The student shall be provided opportunities to:

(A) differentiate between hearing and listening;

(B) provide verbal feedback;

(C) observe nonverbal feedback;

(D) write or repeat information and instructions; and

(E) write summaries of meetings.

(3) Oral communication. The student shall be provided opportunities to:

(A) articulate sounds and words;

(B) select and use speech form and style appropriate to audience and purpose;

(C) interact in group activities;

(D) use proper telephone techniques; and

(E) make oral reports and presentations.

(4) Written communication. The student shall be provided opportunities to:

(A) compile a checklist of techniques for effective writing;

(B) plan, organize, and outline messages;
(C) follow accepted formats of business letters;
(D) examine factors that create clarity of message;
(E) achieve effective tone and style in letters;
(F) edit to evaluate coherence and unity;
(G) proofread for spelling, grammar, syntax, punctuation, and accuracy of statements; and
(H) prepare reports.

(5) Electronic information processes. The student shall be provided opportunities to discuss the use of current electronic methods of transmitting and receiving communications as related to course content.

(f) Career exploration (½ unit). Career exploration shall include the following essential elements:

(1) Self-awareness in relation to work. The student shall be provided opportunities to:
(A) recognize individual values as determining factors in choosing a career; and
(B) assess individual interests, aptitudes, and limitations and relate them to career goals.

(2) Career options. The student shall be provided opportunities to:
(A) develop a system for collecting career information;
(B) explore careers within US Education Department job clusters, including new and emerging occupations;
(C) relate interests and aptitudes to specific career clusters;
(D) identify manipulative skills essential in many occupations;
(E) conduct a job analysis by interviewing and observing; and
(F) identify common elements in an occupation that may transfer to other fields.

(3) Assessment of career opportunities. The student shall be provided opportunities to:
(A) locate and use information for evaluating employment opportunities; and
(B) determine if career objectives can result in desired long-term financial goals.

(4) Career planning. The student shall be provided opportunities to:
(A) understand the necessity for gaining employability skills;
(B) formulate sequential long-range, tentative career plans;
(C) determine the amount of education or training needed to achieve career goals;
(D) obtain pertinent information about schools and training programs;
(E) select a tentative high school educational plan best suited to needs and desires;
(F) use constructive decision-making skills; and
(G) identify sources of financial assistance for any type of education or experience.

(5) Job seeking. The student shall be provided opportunities to:
(A) locate information about job opportunities for which one is qualified;
(B) identify employment sources;
(C) make job applications; and
(D) interview for a job.

(6) Growing on the job. The student shall be provided opportunities to:
(A) discuss the importance of maintaining and advancing on the job; and
(B) develop interpersonal skills needed in working roles.

(7) Electronic information processes. The student shall be provided opportunities to discuss the use of current electronic methods of accessing database career information as related to course content.

(g) Personal business management (½ unit). Personal business management shall include the following essential elements:

(1) Money management. The student shall be provided opportunities to:
(A) develop personal economic problem-solving skills;
(B) understand a paycheck;

(C) plan the use of income;
(D) use banking services;
(E) plan a savings program,
(F) understand the meaning and use of credit;
(G) plan major purchases; and
(H) develop cost benefit analysis skills.

(2) Personal records. The student shall be provided opportunites to:
(A) keep accurate records of income, spending, and savings;
(B) prove accuracy of checkbook records; and
(C) file an income tax report.

(3) Reduction of economic risks. The student shall be provided opportunities to:
(A) discuss the purpose of insurance;
(B) discuss insuring for health protection;
(C) discuss insuring for income security;
(D) discuss insuring vehicles; and
(E) discuss insuring home and property.

(4) Individuals and work. The student shall be provided opportunities to:
(A) plan for future income;
(B) examine the necessity for adapting to a changing job world;
(C) examine the importance of job satisfaction;
(D) discuss how work attitudes and behavior affect absenteeism; and
(E) examine the concept of voluntary exchange as it relates to employment.

(5) Electronic information processes. The student shall be provided opportunities to discuss the use of current electronic methods of transferring funds and accessing database information as related to course content.

(h) Recordkeeping (½-1 unit). Recordkeeping shall include the essential elements in this subsection. Recordkeeping offered for one semester must include the elements in paragraphs (1) - (3) of this subsection. Recordkeeping offered for two semesters must include all of the elements in this subsection.

(1) Recording and maintaining information. The student shall be provided opportunities to:
(A) understand the importance of keeping accurate records;
(B) organize a recordkeeping system;
(C) maintain records and prepare statements for a small business;
(D) develop recordkeeping vocabulary;
(E) identify applications of computer technology to business tasks; and
(F) process data electronically.

(2) Banking. The student shall be provided opportunities to:
(A) identify different kinds of banking services;
(B) open and maintain different kinds of bank accounts;
(C) differentiate between various types of check endorsements; and
(D) reconcile bank statements.

(3) Money management. The student shall be provided opportunities to:
(A) plan and maintain a budget;
(B) learn how to obtain and use credit;
(C) verify bills and statements;
(D) establish and maintain a petty cash fund; and
(E) compile personal income tax information.

(4) Payroll. The student shall be provided opportunities to:
(A) calculate earnings using various payroll plans;

(B) figure and report payroll deductions;
(C) maintain payroll register;
(D) maintain records required for tax audit; and
(E) compile quarterly tax reports.

(5) Business forms. The student shall be provided opportunities to:
(A) determine functions of various business forms; and
(B) prepare and process source documents.

(6) Inventory. The student shall be provided opportunities to:
(A) procure, store, and issue supplies; and
(B) differentiate between periodic and perpetual inventory.

(7) Electronic information processes. The student shall be provided opportunities to discuss the use of current electronic methods of inventory control, transferring funds, and accessing database information as related to course content.

(i) Advanced typewriting/word processing (½-1 unit). Advanced typewriting/word processing shall include the following essential elements:

(1) Proficiency in keyboarding. The student shall be provided opportunities to:
(A) refine techniques, speed, and accuracy;
(B) improve level of proficiency in manipulating machine;
(C) refine work habits; and
(D) care for equipment.

(2) Communication skills. The student shall be provided opportunities to:
(A) refine communication skills for producing usable copy;
(B) express numbers correctly;
(C) compose various types of business messages; and
(D) refine proofreading abilities.

(3) Problem typing skills. The student shall be provided opportunities to:
(A) interpret and follow directions;
(B) complete business forms, both printed and unprinted;
(C) prepare copy for various types of duplicating processes;
(D) make decisions about placement, format, and priority of completion;
(E) tabulate tables; and
(F) produce manuscripts, reports, and legal documents.

(4) Production skills. The student shall be provided opportunities to produce under timed situations usable copy of different kinds of business documents, messages, and forms from rough draft, corrected, and handwritten copy.

(5) Word processing skills. The student shall be provided opportunities to:
(A) develop word processing skills; and
(B) use word processing equipment when available.

(6) Office style simulation. The student shall be provided opportunities to:
(A) develop skills in working with realistic business situations;
(B) develop competencies in organizing and planning for work in an office setting;
(C) increase awareness of the various typing tasks found in specialized offices; and
(D) develop human relation skills.

(7) Electronic information processes. The student shall be provided opportunities to discuss the use of current electronic methods of transmitting and receiving information as related to course content.

(j) Advanced accounting (½-1 unit). Advanced accounting shall include the essential elements in this subsection. Advanced accounting offered for one semester must include the elements in paragraphs (1) - (5)

of this subsection. Advanced accounting offered for two semesters must include all of the elements in this subsection.

(1) Basic principles and procedures. The student shall be provided opportunities to:

(A) reinforce logical structure and reasoning processes of accounting; and

(B) compile various kinds of financial reports for both internal use and government agencies.

(2) Payroll. The student shall be provided opportunities to compute, maintain, and report payroll information.

(3) Adjustment accounts. The student shall be provided opportunities to:

(A) estimate uncollectable accounts receivable;

(B) comply with government regulations for acquiring, depreciating, depleting, and disposing of fixed assets;

(C) dispose of buildings and land; and

(D) record and adjust accrual and deferral accounts.

(4) Control systems. The student shall be provided opportunities to:

(A) use a voucher system;

(B) price and control inventory; and

(C) design a budgetary control system.

(5) Automated accounting. The student shall be provided opportunities to:

(A) use and interpret computer flowcharts;

(B) develop a working knowledge of the numbering system for the chart of accounts;

(C) use the batch process to record transactions in journal entry transmittals;

(D) convert data from journal entry transmittals to input media; and

(E) process data electronically.

(6) Partnership. The student shall be provided opportunities to:

(A) form and terminate partnerships; and

(B) divide earnings and losses.

(7) Taxes, notes, and drafts. The student shall be provided opportunities to:

(A) calculate and record sales tax;

(B) figure and record business property tax;

(C) record notes receivable and notes payable; and

(D) handle drafts, bills of lading, and trade acceptances.

(8) Corporation accounting. The student shall be provided opportunities to:

(A) interpret certificates of incorporation;

(B) record transactions for starting a corporation;

(C) differentiate between common and preferred stock;

(D) handle stock transfers;

(E) journalize procedures for paying dividends; and

(F) analyze the equity of a corporation.

(9) Cost accounting. The student shall be provided opportunities to:

(A) prepare cost sheets; and

(B) record and interpret entries related to direct and indirect costs.

(10) Managerial uses. The student shall be provided opportunities to relate accounting data with decision making.

(11) Electronic information processes. The student shall be provided opportunities to discuss the use of current electronic methods of transferring funds and accessing database information as related to course content.

(k) Business and consumer law (½ unit). Business and consumer law shall include the following essential elements:

(1) Origin of and necessity for a court system. The student shall be provided opportunities to:

(A) distinguish between constitutional, statutory, common, and administrative law;

(B) understand the organizational structure of our court systems;

(C) distinguish between a felony and a misdemeanor; and

(D) distinguish between a tort and a crime.

(2) Characteristics of contracts. The student shall be provided opportunities to:

(A) identify the essentials of an enforceable contract; and

(B) discuss the rights and obligations of both the assignor and the assignee in contracts.

(3) Buying goods and service. The student shall be provided opportunities to:

(A) define a purchasing contract;

(B) differentiate between express warranties and implied warranties made by the seller;

(C) clarify the debtor and creditor relationship;

(D) define the essentials of a negotiable instrument;

(E) discuss consumer protection laws; and

(F) define a holder in due course and the liability for a negotiable instrument.

(4) Personal and real property. The student shall be provided opportunities to:

(A) distinguish between personal and real property;

(B) distinguish between a bailment and a sales relationship; and

(C) understand rental contracts and leases regarding the rights and obligations of landlords and tenants.

(5) Economic protection. The student shall be provided opportunities to:

(A) understand the importance of wills; and

(B) determine priority in the distribution of an estate when there is no will.

(6) Agency and employment. The student shall be provided opportunities to:

(A) discuss the obligations of each party to an employment contract; and

(B) examine the liability of a principal to a third party for the acts of an agent or employee.

(7) Electronic information processes. The student shall be provided opportunities to discuss the use of current electronic methods of accessing database information as related to course content.

(l) Introduction to computer programming (½ unit). Introduction to computer programming shall include the following essential elements:

(1) Introduction to programming. The student shall be provided opportunities to:

(A) keyboard prewritten simplified input;

(B) differentiate between control statements and programming statements;

(C) understand the difference between a data file and a program;

(D) store and retrieve information from different media;

(E) edit programming statements; and

(F) take care of the computer and media.

(2) Simulating computer program. The student shall be provided opportunities to:

(A) learn the order in which commands and conditional/unconditional statements are accepted by the computer;

(B) identify the uses of variables, constants, and literals; and

(C) identify action words in language.

(3) Flowcharting. The student shall be provided opportunities to:

(A) follow logical steps in the problem-solving process;

(B) follow direction flow and use connectors;

(C) determine alternatives and make decisions;

(D) sequence and link; and

(E) loop and complete.

(4) Structuring programs. The student shall be provided opportunities to:
(A) correlate read and input statements;
(B) format input and output;
(C) use branch statements;
(D) use subroutines and repetitive operations;
(E) apply graphics to business applications;
(F) use string manipulation; and
(G) debug.

(5) Documentation. The student shall be provided opportunities to:
(A) follow proper methods of software documentation;
(B) list facts about the program; and
(C) list bugs.

(6) Electronic information processes. The student shall be provided opportunities to discuss how computer programs provide for efficient flow of information.

(m) Business management and ownership (½-1 unit). Business management and ownership shall include the essential elements in this subsection. Business management and ownership offered for one semester must include the elements in paragraphs (1) - (3) of this subsection. Business management and ownership offered for two semesters must include all of the elements in this subsection.

(1) Business structure. The student shall be provided opportunities to:
(A) identify characteristics of each type of business ownership;
(B) differentiate between private, public, quasi-public, and governmental business structures;
(C) determine the advantages and disadvantages of each type of business ownership; and
(D) assume the role of an entrepreneur in a free enterprise system.

(2) Functions of management. The student shall be provided opportunities to:
(A) plan and set long-range and short-range goals;
(B) organize (staffing, distributing authority);
(C) control (production, inventory);
(D) direct (motivating, leading);
(E) make decisions;
(F) deal with social responsibilites; and
(G) adapt to technological changes.

(3) Finance. The student shall be provided opportunities to:
(A) examine financing a business;
(B) examine maintaining and interpreting financial information;
(C) examine the management of credit sales and collections; and
(D) examine the need for insuring against financial loss.

(4) Human resources. The student shall be provided opportunities to:
(A) discuss selecting, training, and promoting employees;
(B) discuss promoting human relations;
(C) discuss coping with change and conflict;
(D) discuss types of compensation and benefits; and
(E) discuss dealing with labor relations.

(5) Marketing. The student shall be provided opportunities to:
(A) learn how to promote sales;
(B) explore pricing procedures in a free market; and
(C) learn processes of distributing goods and services.

(6) Government and business. The student shall be provided opportunities to:
(A) examine interaction between government and business;

(B) learn about the regulation of non-competitive practices;
(C) examine the regulating of retail prices; and
(D) explore taxing.

(7) International business. The student shall be provided opportunities to:
(A) study world trade; and
(B) differentiate between balance of trade and balance of payments.

(8) Electronic information processes. The student shall be provided opportunities to discuss the use of current electronic methods of database management systems and accessing various types of databases as related to course content.

(n) Office procedures (cannot be taken concurrently with vocational office education) (½-1 unit). Office procedures shall include the following essential elements:

(1) General office knowledge. The student shall be provided opportunities to:
(A) identify duties and responsibilities common to most offices;
(B) delineate the work flow of an office or system;
(C) relate office operations to the entire business organization;
(D) plan and organize work;
(E) maintain supplies; and
(F) effect good human relations.

(2) Clerical duties. The student shall be provided opportunities to:
(A) develop a working knowledge of various kinds of banking services;
(B) calculate and verify business computations;
(C) disburse and replenish a petty cash fund; and
(D) operate calculator with proficiency.

(3) Communications and information. The student shall be provided opportunities to:
(A) follow oral and written directions;
(B) use appropriate telephone techniques;
(C) transform dictated or handwritten copy into final product;
(D) set priorities for completion of work;
(E) record minutes of meetings and conferences; and
(F) prepare reports and documents.

(4) Filing and records management. The student shall be provided opportunities to:
(A) identify equipment and supplies necessary for a filing system;
(B) establish and maintain a filing system;
(C) relate micrographic processes with filing systems; and
(D) establish a transfer and retention schedule.

(5) Handling mail. The student shall be provided opportunities to:
(A) process incoming and outgoing mail; and
(B) identify different classes of mail and special mailing services.

(6) Travel, meetings, and conferences. The student shall be provided opportunities to:
(A) arrange travel and transportation services; and
(B) schedule meetings and conferences.

(7) Electronic information processes. The student shall be provided opportunities to discuss the use of current electronic office technology, including methods of transmitting and receiving information as related to course content.

(o) Shorthand (½-1 unit). Shorthand shall include the essential elements in this subsection. Shorthand offered for one semester must include the elements in paragraphs (1) - (3) of this subsection. Shorthand offered for two semesters must include all of the elements in this subsection.

(1) Shorthand theory. The student shall be provided opportunities to:

(A) learn shorthand symbols;

(B) automatize brief forms/speed forms;

(D) write phonetically; and

(E) master shorthand theory.

(2) Techniques. The student shall be provided opportunities to:

(A) learn the correct writing position;

(B) develop correct writing techniques; and

(C) develop proportion rather than size of characters.

(3) Skill development (should be emphasized both semesters). The student shall be provided opportunities to:

(A) read under timing;

(B) write familiar outlines;

(C) preview dictation material;

(D) build speed by repetition;

(E) expand business vocabulary;

(F) construct unfamiliar outlines;

(G) improve concentration and retention; and

(H) write for extended periods of time.

(4) Transcription. The student shall be provided opportunities to:

(A) transcribe at the typewriter;

(B) improve proofreading and correcting techniques;

(C) increase skill in punctuation, word division, spelling, and grammar usage; and

(D) produce copy in mailable business form under timed situations.

(5) Electronic information processes. The student shall be provided opportunities to discuss how the skill of shorthand can expedite the flow of information in the automated office

(p) Advanced shorthand (½-1 unit). Advanced shorthand shall include the following essential elements:

(1) Reinforcement of theory. The student shall be provided opportunities to:

(A) review theory principles;

(B) automatize frequently used words and phrases; and

(C) construct unfamiliar outlines.

(2) Dictation. The student shall be provided opportunities to:

(A) increase dictation speed levels;

(B) use varied and specialized materials; and

(C) develop specialized terminology.

(3) Transcription. The student shall be provided opportunities to:

(A) refine subskills of spelling, word differentiation, rules of punctuation, number usage, capitalization;

(B) produce usable transcripts; and

(C) refine proofreading ability.

(4) Office-style dictation. The student shall be provided opportunities to:

(A) make insertions and deletions in notes;

(B) change location of words or sentences; and

(C) check figures for accuracy.

(5) Production. The student shall be provided opportunities to:

(A) extend periods of dictation;

(B) lengthen timed transcription;

(C) use a variety of communications; and

(D) transcribe office-type dictation.

(6) Electronic information processes. The student shall be provided opportunities to discuss how the skill of shorthand can expedite the flow of information in the automated office.

(q) Personal finance (½-1 unit). Personal finance shall include the following essential elements:

(1) Insurance. The student shall be provided opportunities to:

(A) examine the concept of risk and the need for insurance;

(B) discuss the probability of loss and how insurance works;

(C) identify the different kinds of insurance;

(D) read and understand insurance policies;

(E) differentiate between personal and property insurance;

(F) determine the legal status of an insurance policy; and

(G) plan an insurance program.

(2) Investments. The student shall be provided opportunities to:

(A) investigate and discuss investing in securities;

(B) relate investments to short- and long-term goals and needs;

(C) establish criteria for the selection of savings and investments;

(D) distinguish between stocks and bonds;

(E) analyze an annual report;

(F) investigate how one participates in a mutual fund investment plan; and

(G) plan an investment program.

(3) Real estate. The student shall be provided opportunities to:

(A) discuss investing in real estate;

(B) compare costs of renting with home ownership;

(C) identify types of land ownership;

(D) investigate factors in buying or building a home;

(E) examine the rights and responsibilites of real property ownership;

(F) explore the cost of financing a home;

(G) differentiate between mortgage, judgment lien, and mechanics lien;

(H) determine closing costs; and

(I) identify restrictions that might be found in deeds.

(4) Electronic information processes. The student shall be provided opportunities to discuss the use of current electronic methods of accessing database information as related to course content.

§75.81 *Essential Elements Common to All Programs.*

(a) The elements in this subsection are common to all vocational programs and shall be included in each addressed course at the appropriate level. They are described here to preclude repetition in each course description. Every school offering vocational education shall provide courses which include the following essential elements:

(1) Leadership concepts and skills. The student shall be provided opportunities to:

(A) identify characteristics and responsibilities of leaders and effective group members;

(B) participate in orderly meetings conducted according to parliamentary procedure (optional in occupational orientation);

(C) function effectively on committees (optional in occupational orientation);

(D) plan and conduct leadership activities; and

(E) prepare for effective citizenship and participation in our democratic society.

(2) Concepts and skills related to successful employment. The student shall be provided opportunities to:

(A) develop an awareness of employment opportunities in chosen field;

(B) practice correct procedures for job application and interview;

(C) develop the ability to take and follow both oral and written directions;

(D) practice punctuality and dependability;

(E) observe rules and standards of the work place;

(F) demonstrate an ability to work with others harmoniously;

(G) develop responsibility and the ability to follow through on assigned tasks; and

(H) exhibit productive work habits and attitudes.

(3) Concepts and skills associated with entrepreneurship. The student shall be provided opportunities to:

(A) recognize opportunities and options for business ownership;

(B) identify entry-level procedures, planning processes, and terms needed to open a business; and

(C) develop an understanding of the role of small business in the free enterprise system.

(b) Objectives for these elements must be modified to suit the needs and abilities of individual handicapped students, disadvantaged students, and those with limited English proficiency.

(c) Individual course descriptions are given for occupations identified by specific six-digit instructional codes. Whether students receive instruction for an identified occupation through a pre-employment labratory program or through cooperative training they must receive the essential elements specified in appropriate sections. Only those occupational training areas in which enrollment totals at least one percent of total program enrollment are described. Such individual course descriptions are found in agribusiness education, health occupations education, marketing and distributive education, occupational home economics education, office education, technical education, and trade and industrial education.

(d) Pre-vocational education (½-1 unit) may be offered by school districts.

(1) Pre-vocational education is comprised of exploration activities in one or more occupational clusters or specific occupational areas. The activities are intended to provide students a greater understanding of vocational education options and to assist them in making meaningful and informed vocational education choices.

(2) Pre-vocational classes are one hour classes that may be offered for either a full-year in an occupational cluster or specific occupational area or up to six different occupational areas in one year.

(3) Pre-vocational education may be offered in any vocational area with the exception of industrial arts, occupational orientation, and cosmetology.

(4) Every school offering pre-vocational education shall provide courses that include the following essential elements:

(A) Concepts and skills involved in the exploration of an occupational cluster or specific occupational area. The student shall be provided opportunities to:

(i) identify and analyze the jobs within an occupational cluster or specific occupational area; and

(ii) participate in basic laboratory experiences related to the occupational cluster or specific occupational area.

(B) Concepts and skills associated with safe working practices. The student shall be provided opportunities to:

(i) identify and understand safe working practices; and

(ii) apply safe working practices to all laboratory related instruction.

(C) Concepts and skills associated with the care and use of hand tools and equipment. The student shall be provided opportunities to develop an understanding of the proper techniques for the use, maintenance, and storage of tools and equipment related to the occupational cluster or specific occupational area.

(D) Concepts and skills related to career awareness. The student shall be provided opportunities to:

(i) develop knowledge of a broad range of career options associated with the cluster or occupational area being studied;

(ii) practice good work habits; and

(iii) relate personal traits, habits, and attitudes to success in the chosen occupation.

§75.82 *Agriculture and Agribusiness Education.*

(a) Vocational agriculture I (1 unit) shall be a shop/laboratory-oriented course that includes the following essential elements:

(1) Introduction to agriculture concepts and skills. The student shall be provided opportunities to:

(A) determine the importance of agriculture as an industry;

(B) develop awareness of agriculture careers; and

(C) identify and apply safe working practices for all agricultural operations.

(2) Animal science concepts and skills. The student shall be provided opportunities to:

(A) examine the economic importance of livestock and poultry;

(B) identify breeds of livestock and poultry including beef cattle, dairy cattle, swine, horses, goats, sheep, and poultry;

(C) develop ability to select livestock and poultry in relation to conformation and productivity;

(D) handle and restrain livestock and poultry to perform various activities and safe working practices;

(E) develop ability to castrate, dehorn, brand, mark, ear notch, tag, and tattoo and dock livestock and to perform injection procedures; and

(F) assimilate the vocabulary of livestock management.

(3) Soil science concepts and skills. The student shall be provided opportunities to:

(A) recognize the importance of soils;

(B) understand the physical makeup and characteristics of soils;

(C) identify the components of soils including mineral matter, organic matter, air, and water;

(D) determine the properties of soils including ph, color, texture, depth, permeability, slope, fertility, and erosion;

(E) practice proper method to take soil samples;

(F) identify kinds of erosion including water, wind, social, or physical factors;

(G) recognize erosion control measures;

(H) identify methods to conserve and control soil water; and

(I) learn the amount of water requirements for major crops.

(4) Plant science concepts and skills. The student shall be provided opportunities to:

(A) understand the economic importance of crops and identify major cash crops;

(B) identify the major uses of crops, processing and consumption;

(C) identify the elements and the functions of each in plant growth;

(D) understand the process by which seeds germinate and the process of photosynthesis;

(E) identify field crops through individual characteristics and plant selection;

(F) classify field crops as to forage, grain, food, or fiber crops;

(G) select field crops in relation to climate and soil conditions;

(H) understand plant reproduction and identify plants reproduced sexually and asexually;

(I) understand methods of land preparation for various crops and selection of fertilizers in relation to soil analysis;

(J) understand methods of irrigation in relation to the crop including row, trickle, flooding, or sprinkling;

(K) understand methods of planting and become familiar with seed varieties and types of equipment for planting; and

(L) identify methods of harvesting and marketing of all the major crops.

(5) Agricultural mechanics concepts and skills. The student shall be provided opportunities to:

(A) become familiar with general shop procedures;

(B) understand importance of mechanics to agriculture;

(C) practice safety procedures in the shop and the operation of equipment;

(D) perform farm carpentry using all hand wood-working tools;

(E) identify and understand the use of wood fasteners;

(F) identify various types of lumber and compute a bill of materials;

(G) identify measuring and marking devices used in woodworking;

(H) identify the various kinds of metal used in agriculture;

(I) learn how to cut, file, bend, and shape metal;

(J) drill holes in metal and tap and thread them;

(K) select and apply paint, including brush or spray painting; and

(L) sharpen and temper wood and metal hand tools.

(6) Supervised occupational experience program concepts and skills. The student shall be provided opportunities to:

(A) plan and establish individual supervised occupational experience programs;

(B) identify the purposes and characteristics of a good supervised occupational experience program;

(C) identify methods and purposes of keeping supervised occupational experience program records;

(D) evaluate the supervised occupational experience program; and

(E) appreciate the need for keeping records for awards and recognition.

(b) Vocational agriculture II (1 unit) shall be a shop/laboratory-oriented course that includes the following essential elements:

(1) Animal science concepts and skills. The student shall be provided opportunities to:

(A) understand the anatomy and physiology of livestock and poultry as related to the circulatory, respiratory, skeletal, muscular, and digestive system;

(B) understand livestock and poultry nutrition as related to feed nutrients, classes of feed, feed additives, digestion and absorption, and rations;

(C) recognize and treat livestock and poultry diseases including bacterial, viral, nutritional, fungal, and miscellaneous diseases;

(D) recognize and control livestock and poultry parasites, both external and internal, and practice the prevention of parasites; and

(E) evaluate livestock and poultry including live animal judging and grading, carcass judging and grading, poultry judging, poultry and egg grading.

(2) Soil science concepts and skills. The student shall be provided opportunities to:

(A) identify methods of improving soil fertility including basic soil nutrients, fertilizers, and organic matter and recognize soil deficiencies, secondary elements, and ph; and

(B) understand land evaluation in relation to soil characteristics, identify land use classes, land judging, and principles of land use.

(3) Plant science concepts and skills. The student shall be provided opportunities to:

(A) identify and select plants used for range, forest, pasture, and poisonous plants;

(B) determine utilization of grass and forest lands to include control of undesirable plants and animals, reseeding, and protection against fire and harvesting;

(C) identify plant nutrients as related to plant requirements, inorganic and organic fertilizers, methods, rates, and time of application;

(D) identify insect and disease problems and their control with safe application of agricultural chemicals; and

(E) practice mechanical and chemical weed control.

(4) Agricultural mechanics concepts and skills. The student shall be provided opportunities to:

(A) learn the proper use and safety practices for power tools including bench or circular saw, drill press, portable electric saw, grinder, power hack saw or metal band saw, and sabre saw;

(B) safely operate the oxyacetylene welder and the arc welder;

(C) perform the skills needed for oxyacetylene cutting and welding and for electric arc welding; and

(D) perform the skills needed for concrete construction including estimating concrete needed, construction of forms and reinforcing, placing, finishing, and curing concrete.

(5) Supervised occupational experience program concepts and skills. The student shall be provided opportunities to:

(A) plan the improvement of supervised occupational experience programs by determining individual potentials and goals and possibilities for earnings and profits;

(B) identify methods of keeping accurate records of supervised occupational experience programs;

(C) analyze and evaluate supervised occupational experience programs; and

(D) appreciate the need for keeping records for awards and recognition.

(6) Concepts and skills related to agriculture opportunities. The student shall be provided opportunities to:

(A) explore careers in agriculture; and

(B) determine skill and competencies needed for employment and job placement techniques.

(7) Environmental protection and energy conservation concepts and skills. The student shall be provided opportunities to:

(A) understand the regulation and certification requirements for the use of chemicals; and

(B) recognize ways to conserve fuel and electric energy on the farm and ranch.

(c) Vocational agriculture III (1 unit) shall be a shop/laboratory-oriented course that includes the following essential elements:

(1) Animal science concepts and skills. The student shall be provided opportunities to:

(A) develop an understanding of animal reproduction as related to genetics, reproduction systems, breeding systems, methods of breeding, breeding livestock, care at parturition, palpation, and artificial insemination;

(B) evaluate livestock by use of carcass evaluation and performance and production testing;

(C) identify economic and aesthetic values of wildlife and environmental factors affecting wildlife; and

(D) plan effective livestock facilities.

(2) Soil science concepts and skills. The student shall be provided opportunities to:

(A) read and interpret soil maps, soil mapping units, contour maps, and numbering systems;

(B) identify the basic considerations for soil management, economic importance and managing soils for field crops and grassland; and

(C) identify the agencies assisting in soil and water conservation such as Soil Conservation Service, Agricultural Stabilization and Conservation Service, Soil and Water Conservation Districts, Watershed Districts, and others.

(3) Plant science concepts and skills. The student shall be provided opportunities to:

(A) understand plant breeding as related to maintaining pure lines and hybridization;

(B) identify methods and equipment used in harvesting, handling, grading, and packing of crops; and

(C) identify, classify, and select fruits, vegetables, and ornamental plants.

(4) Agricultural mechanics concepts and skills. The student shall be provided opportunities to:

(A) learn safety procedures in working with electrical wiring and motors;

(B) develop wiring layouts;

(C) identify the types and proper use of electric motors;

(D) maintain and care for electric motors;

(E) learn the basic principles of a two-cycle and four-cycle internal combustion engine;

(F) disassemble and reassemble the small air-cooled engine;

(G) identify procedures involved in operation and daily care of the tractor;

(H) service the air cleaner and crankcase, and lubricate the tractor;

(I) identify plumbing procedures and skills needed to install and maintain the farm and home water and sanitation system; and

(J) learn the basic use of the farm level in staking out foundations and fence lines.

(5) Agricultural management concepts and skills. The student shall be provided opportunities to:

(A) learn the importance of good management and basic decisions in agricultural management;

(B) understand the principles of economics as related to supply and demand, diminishing returns, comparative advantage, and resource substitution;

(C) identify sources of credit, interest rates, credit instruments, principles of borrowing, and banking procedures.

(D) appreciate agricultural planning as it relates to planning a farm business, determining farm costs, equipment purchases, and investment planning;

(E) recognize the purposes and types of records, depreciation, income and financial statements, income tax returns, and social security;

(F) identify types of agricultural insurance such as life, hospitalization, building, fire, windstorm, crop, livestock, vehicle, liability, title, and Texas worker's compensation insurance;

(G) learn efficient methods of marketing agricultural products, demands and outlets, governmental programs, and marketing cooperatives; and

(H) identify various available agricultural programs and services.

(6) Supervised occupational experience program concepts and skills. The student shall be provided opportunities to:

(A) plan supervised occupational experience program in relation to developing the individual's potential;

(B) identify procedures for keeping accurate records;

(C) analyze productive projects to evaluate supervised occupational experience programs; and

(D) gain greater expertise in keeping records for awards and recognition.

(7) Concepts and skills related to agricultural opportunities. The student shall be provided opportunities to:

(A) explore careers in agriculture; and

(B) identify job placement techniques.

(d) Vocational agriculture IV (1 unit) shall be a shop/laboratory-oriented course that includes the following essential elements:

(1) Animal science concepts and skills. The student shall be provided opportunities to recognize livestock production management procedures such as livestock registration, breed classification and certification, specific pathogen-free program, and pre-conditioning livestock.

(2) Soil science concepts and skills. The student shall be provided opportunities to:

(A) become proficient in soil testing and using soil test results;

(B) learn appraisal and productivity of the soil to evaluate land; and

(C) manage acid, alkaline, saline, and sodic soils.

(3) Agricultural mechanics concepts and skills. The student shall be provided opportunities to:

(A) perform skills needed for farm and ranch building construction, selection of materials, sketching plans, and determining bills of materials;

(B) practice advanced methods of farm truck, tractor, machinery maintenance and repair;

(C) develop skills in advanced oxyacetylene welding and brazing;

(D) develop skills in concrete masonry construction; and

(E) perform skills needed for planning and building farm fences.

(4) Agricultural management concepts and skills. The student shall be provided opportunities to:

(A) learn the importance of agricultural planning as it relates to production, soil and water conservation, livestock program, cropping system, use of labor, and wildlife management program;

(B) learn legal rights and responsibilities as they relate to water rights, boundary lines, fencing rights, rights-of-way, easements, livestock, and seed laws;

(C) understand factors involved in farm appraisal and legal instruments;

(D) recognize methods of marketing livestock and crops, market news, and price quotations; and

(E) develop a knowledge of agricultural-related computer applications.

(5) Supervised experience program concepts and skills. The student shall be provided opportunities to:

(A) determine individual possibilities in planning supervised occupational experience programs;

(B) identify procedures for keeping accurate records;

(C) analyze productive projects to evaluate supervised occupational experience programs; and

(D) recognize the need for keeping records for awards and recognition.

(6) Concepts and skills related to agricultural occupations. The student shall be provided opportunities to:

(A) make tentative career choice; and

(B) practice job placement techniques.

(e) Agribusiness education shall include the following essential elements:

(1) Concepts and skills related to opportunities in agribusiness. The student shall be provided opportunities to:

(A) determine employment opportunities and occupational requirements;

(B) choose an occupation;

(C) prepare for an interview;

(D) understand employee-employee and employee-employer relations;

(E) study employee benefits and payroll information;

(F) understand business ownership;

(G) determine occupational interests;

(H) assess personal qualities for training and employment;

(I) prepare applications; and

(J) maintain job security.

(2) Concepts and skills related to safety and safe working conditions. The student shall be provided opportunities to:

(A) understand shop procedure and clean-up;

(B) identify and understand safe working practices; and

(C) apply safe work practices and procedures to all occupational training situations.

(3) Concepts and skills related to supervised occupational experience program. The student shall be provided opportunities to:

(A) plan individual supervised occupational experience programs;

(B) keep records of supervised occupational experience programs;

(C) use records for awards and recognition; and

(D) participate on individual basis at agricultural demonstrations, workshops, career days, field days, contests, etc.

(4) Concepts and skills related to the specific occupation being taught.

(f) Feed sales and service (2-3 units) shall be a shop/laboratory-oriented course and shall include the essential agribusiness elements and concepts and skills related to feed sales and service. The student shall be provided opportunities to:

(1) recognize the importance of the feed industry;

(2) understand the organization and function of the feed business;

(3) apply accepted business procedures;

(4) define the functions of feed as related to animal nutrition;

(5) understand and interpret the regulations governing labeling and formulations;

(6) understand anatomy, digestion, absorption, balanced rations, supplements, and creep feeding;

(7) prepare feed for the various classes of animals;

(8) understand range management practices;

(9) relate sanitation and animal health practices;

(10) understand the methods of disease control;

(11) recognize the symptoms of common diseases;

(12) practice and recommend rodent control;

(13) understand agricultural chemical standards; and

(14) recommend appropriate products, according to customer needs.

(g) Forest products harvesting (2-3 units) shall be a shop/laboratory-oriented course and include the essential agribusiness elements and concepts and skills related to forest products harvesting. The student shall be provided opportunities to:

(1) recognize the importance of forestry, the multiple use concept, and beneficial influences of forests;

(2) identify and understand tree physiology, tree identification, and tree crown classification;

(3) relate the forest environment to physical and biological factors, geology and forest soils, forest ecology, forest types, and density;

(4) understand wood characteristics, identification, commercial trees of Texas, and species of local importance;

(5) determine forest protection against fires, insects, diseases, injury by animals, weather damage, undesirable species, chemicals, and safe fire fighting;

(6) understand the fundamentals of reforestation and applied silviculture;

(7) perform forestry measurements;

(8) identify and understand forest management activities and economics;

(9) plan timber harvest, purchasing stumpage, and harvesting operations;

(10) determine utilization of forest products; and

(11) understand the business aspects of forestry, taxation, forest laws, and real estate.

(h) Fertilizer sales and service (2-3 units) shall include the essential agribusiness elements and the concepts and skills related to fertilizer sales and services. The student shall be provided opportunities to:

(1) recognize the importance of the fertilizer industry;

(2) understand the role of an agricultural salesperson;
(3) understand the organization and function of a fertilizer supplier;
(4) use accepted business procedures;
(5) recognize types of soil and soil problems;
(6) describe the sources of fertilizer nutrients;
(7) define the function of plant food elements;
(8) recognize the forms of fertilizers;
(9) learn the special uses for fertilizers;
(10) understand the principles involved in the use of fertilizers;
(11) recognize the methods of applying fertilizer;
(12) understand the operation of fertilizer plant equipment and application equipment;
(13) take the precautions to prevent improper use of fertilizers;
(14) understand fertilizer and chemical regulations and control; and
(15) recommend appropriate products according to customer needs.

(i) Milk processing plant employee (2-3 units) shall include the essential agribusiness elements and the concepts and skills related to milk processing plant employee. The student shall be provided opportunities to:
(1) recognize the importance of the milk processing industry;
(2) recognize the nutritional properties of milk;
(3) understand microbiology and sanitation practices;
(4) understand milk quality and control;
(5) understand milk processing;
(6) operate milk processing equipment;
(7) recognize by-products and specialty items;
(8) perform plant equipment maintenance;
(9) understand electrical power and refrigeration;
(10) understand plant management procedures;
(11) perform plant maintenance;
(12) recognize the economic problems related to milk production;
(13) recognize the management problems related to milk production and marketing; and
(14) understand the relationship between production, marketing, processing, and distribution.

(j) Poultry farm worker - broiler production (2-3 units) shall include the essential agribusiness elements and the concepts and skills related to poultry farm worker - broiler production. The student shall be provided opportunities to:
(1) recognize the importance of the broiler industry;
(2) identify safety practices on a poultry farm;
(3) keep poultry farm business records;
(4) understand management practices;
(5) select, care for, and maintain mechanical equipment;
(6) clean and learn sanitation and health practices;
(7) prevent and control diseases;
(8) control internal parasites;
(9) feed broilers;
(10) market broilers;
(11) perform mechanical related activities; and
(12) understand poultry nutrition.

(k) Poultry farm worker - commercial laying flock (2-3 units) shall include the essential agribusiness elements and the concepts and skills related to poultry farm worker - commercial laying flock. The student shall be provided opportunities to:

(1) recognize the importance of the commercial laying flock;
(2) recognize safety practices on a poultry farm;
(3) keep records for the laying flock;
(4) understand management practices;
(5) select, care for, and maintain mechanical equipment;
(6) clean and learn sanitation and health practices;
(7) prevent and control diseases;
(8) control internal and external parasites;
(9) control insects and pests;
(10) feed the laying flock;
(11) gather, process, and grade eggs;
(12) market eggs;
(13) perform mechanical skills related to commercial egg production; and
(14) understand poultry nutrition.

(l) Veterinary assistant (2-3 units) shall include the essential agribusiness elements and the concepts and skills related to veterinary assistant. The student shall be provided opportunities to:

(1) recognize the importance of the veterinary medicine field;
(2) understand office management procedures;
(3) understand kennel and cage management;
(4) assist with examination and treatment of animals;
(5) understand human and animal health;
(6) recognize the principles of disease control;
(7) recognize the methods of disease control;
(8) understand sterilization and disinfection procedures;
(9) restrain animals;
(10) provide professional assistance;
(11) perform the duties of laboratory aides;
(12) recognize clinical signs of common diseases;
(13) understand animal nutrition;
(14) perform other duties related to a veterinary clinic;
(15) assist with research problems;
(16) develop and practice positive customer relationships; and
(17) develop an awareness of state and federal drug regulations.

(m) Agricultural power and machinery repair (2-3 units) shall be a shop/laboratory-oriented course and shall include the essential agribusiness elements and the concepts and skills related to agricultural power and machinery repair. The student shall be provided opportunities to:

(1) recognize the importance of farm machinery in American agriculture;
(2) understand tractor and equipment safety;
(3) read and interpret service and operators' manuals;
(4) understand tractor design and transmission of powerbelts and pulleys;
(5) use basic and special mechanic tools;
(6) understand the use of gaskets, sealants, seals, tubing, and hose;
(7) service and repair all types of bearings;
(8) identify metals and apply appropriate welding techniques;

(9) clean machines and parts;
(10) understand the basic fundamentals and the servicing and repair of the internal combustion engine;
(11) service and repair the power train and hydraulic systems;
(12) service and repair braking, steering, wheels, tires, and cooling systems;
(13) understand lubricating systems and use of lubricants;
(14) service and repair fuel systems;
(15) service and repair electrical systems;
(16) understand and use testing equipment; and
(17) service and repair farm machines and equipment.

(n) Meat processing (2-3 units) shall be a shop/laboratory-oriented course and shall include the essential agribusiness elements and the concepts and skills related to meat processing. The student shall be provided opportunities to:
(1) understand equipment care and sanitation;
(2) learn the nutritive value of meat, uses, cooking qualities, and palatability;
(3) use meat additives;
(4) understand biological aspects of processing, handling, and storing meat;
(5) learn meat identification;
(6) identify the wholesale and retail cuts of beef, lamb, and pork;
(7) recognize other meats and fish;
(8) select and grade beef, lamb, and pork carcasses;
(9) purchase slaughter animals and know the market classes and grades of cattle, sheep, and swine;
(10) understand marketing cycles and seasonal changes;
(11) develop knowledge of marketing of other slaughter animals and fish;
(12) learn the slaughter of livestock;
(13) learn meat fabrication, equipment operation, portion control, and specifications;
(14) cut wholesale and retail cuts of beef, lamb, pork, and other slaughter animals and fish;
(15) understand meat preparation and preservation;
(16) evaluate wrapping, labeling, and packaging meats and fish;
(17) refrigerate and freeze meats and fish;
(18) recognize and merchandise meat and meat by-products;
(19) buy, sell, ship, handle, and receive meats and fish; and
(20) recognize consumer trends.

(o) Agricultural resources (2-3 units) shall be a shop/laboratory-oriented course and shall include the essential agribusiness elements and the concepts and skills related to agricultural resources. The student shall be provided opportunities to:
(1) identify agricultural resources in the community, state, and nation;
(2) determine the importance and economic impact of agricultural resources;
(3) identify occupations in the agricultural resources areas;
(4) identify employment opportunities and occupational requirements;
(5) understand the real estate industry;
(6) understand, develop, and manage water and wastewater resources;
(7) manage and control air resources, air pollutants, and air quality;
(8) manage fish and other aquatic life;
(9) manage wildlife and wildlife environment;
(10) develop, maintain, operate, and finance outdoor recreational activities;
(11) manage, establish, and improve forest resources;
(12) understand and perform agricultural resource safety activities;

(13) service and repair chain saws, small gasoline engines, boats and boating equipment, recreational vehicles, and electrical equipment; and

(14) understand the fundamentals of taxidermy.

(p) General agricultural mechanics (2-3 units) shall be a shop/laboratory-oriented course and shall include the essential agribusiness elements and the concepts and skills related to general agricultural mechanics. The student shall be provided opportunities to:

(1) recognize the importance of mechanics in American agriculture;
(2) select type and size of tractors and farm machinery;
(3) diagnose engine conditions;
(4) service electrical and air conditioning systems;
(5) service the cooling, fuel, and air systems;
(6) service the clutch, tires, wheels, brakes, and power units;
(7) paint power units and farm machinery;
(8) service and repair small gasoline engines;
(9) set up, maintain, and adjust farm machinery and equipment;
(10) perform electric and oxyacetylene welding;
(11) perform soldering and cold metal work;
(12) plan an agricultural safety program and a farm shop;
(13) construct buildings, equipment, and fences;
(14) use concrete, bricks, tile, and stone in structures;
(15) select materials and electric motors for agricultural electrification;
(16) determine amount and sources of water needed;
(17) plan, service, operate, and repair water and sewage systems;
(18) plan and lay out irrigation systems;
(19) develop skills with a farm level, measuring land and reading legal descriptions;
(20) read specifications; and
(21) perform electrical wiring and repairing electrical motors.

(q) Agricultural chemicals (2-3 units) shall be a shop/laboratory-oriented course and shall include the essential agribusiness elements and the concepts and skills related to agricultural chemicals. The student shall be provided opportunities to:

(1) understand early developments in agricultural chemicals and their importance to animal and plant life;
(2) understand federal and state laws;
(3) understand the computation of dilutions and the use of application equipment;
(4) understand plant ecology;
(5) recognize classes of insects;
(6) understand the classification and use of insecticides;
(7) understand the control of fungi;
(8) understand the control of bacteria;
(9) understand the control of nematodes;
(10) recognize chemicals used in the control of rodents and predators;
(11) understand the physiological principles, classification, properties, and characteristics of herbicides;
(12) determine method of treatment, application, preparation, and herbicide selection;
(13) determine the use of fertilizers;
(14) determine the use and application of harvest-aid chemicals;
(15) determine the use and application of chemicals used as plant regulators;
(16) determine the use and application of agricultural non-crop chemicals; and
(17) recognize pollution caused by agricultural chemicals in water, atmosphere, and in the soil (residues).

(r) Feedlot employment (2-3 units) shall be a shop/laboratory-oriented course and shall include the essential agribusiness elements and the concepts and skills related to feedlot employment. The student shall be provided opportunities to:

(1) understand the nutritive value and physical properties of meat;
(2) identify wholesale and retail cuts of beef, lamb, and pork;
(3) understand yield and quality grades of beef, lamb, and pork;
(4) locate and lay out feedlot including pens, gates, and chutes construction;
(5) purchase, handle, and store feed;
(6) utilize commercial feeding facilities and equipment;
(7) determine facilities for sick animals, drainage, and pollution control;
(8) purchase, receive, and provide initial care of feeder livestock (cattle, sheep, and swine);
(9) understand animal health;
(10) clean, disinfect, and follow sanitary procedures;
(11) control diseases and parasites;
(12) secure and use drugs and parasiticides;
(13) understand quarantines and eradication;
(14) understand the treatment of sick animals and carcass disposal;
(15) understand feeds and feeding;
(16) identify classes of feed, feed additives, and understand analysis and preparation;
(17) identify types of feeding programs and rations;
(18) market live and carcass animals;
(19) understand feed records, finances, cost accounting, computer use, and performance records; and
(20) perform care and maintenance of equipment and facilities.

(s) Ornamental horticulture (2-3 units) shall be a shop/laboratory-oriented course and shall include the essential agribusiness elements and the concepts and skills related to ornamental horticulture. The student shall be provided opportunities to:

(1) understand greenhouse plant classification;
(2) identify greenhouse, ornamental, and nursery plants;
(3) identify bud, stem, leaf, flower, and fruit characteristics;
(4) identify structures and equipment used in providing greenhouse, ornamental, and nursery plants;
(5) determine location, size, environment, and arrangement of a greenhouse;
(6) water and feed greenhouse plants;
(7) select and identify propagation media, nursery soils, compost, mulches, soil mixtures, fertilizers, and other growth materials;
(8) perform soil sterilization;
(9) understand and perform the methods of propagation of plants;
(10) understand selection, breeding, and reproduction of plants;
(11) grow greenhouse plants;
(12) grow nursery stock and ornamentals in containers;
(13) develop and maintain the landscape and turf grasses;
(14) identify and control diseases, insects, organisms, and weeds;
(15) determine floral design accessories, arranging, and judging;
(16) calculate production costs;
(17) understand marketing, financial control, credit records, accounts, labeling, pricing, displaying, and advertising;
(18) select, operate, and maintain horticultural tools and equipment; and
(19) understand and perform home, commercial vegetable, fruit, and nut production.

(t) Coordinated vocational-academic education (CVAE)—farm and ranch mechanical repair (2-3 units) shall be a shop/laboratory-oriented course and shall include the essential agribusiness element and the concepts and skills related to CVAE farm and ranch mechanical repair. The student shall be provided opportunities to:

(1) identify and use hand and power tools;
(2) identify and use fasteners, building materials, and farm level;
(3) plan and construct buildings and equipment;
(4) read plans and blueprints;
(5) compute bill of materials;
(6) select and apply paint;
(7) perform skills needed to install and maintain farm water supply and sanitation system;
(8) perform electrical wiring, care and maintenance of electric motors;
(9) estimate amount needed, forms, reinforcing, placing, finishing, and curing of concrete;
(10) perform electric and oxyacetylene welding and soldering;
(11) service and repair small gasoline engines;
(12) service and maintain the air cleaner, lubrication, cooling, fuel, ignition, power train, braking, hydraulics, steering, and tires for farm trucks and tractors;
(13) perform farm machinery and equipment inspection adjustments, and reconditioning; and
(14) plan, build, and maintain fences.

(u) Coordinated vocational-academic education (CVAE)—horticultural related occupations (2-3 units) shall be a shop/laboratory-oriented course and shall include the essential agribusiness elements and the concepts and skills related to CVAE horticultural related occupations. The student shall be provided opportunities to:

(1) understand plant classification;
(2) identify plants by leaf, flower, bud, and stem characteristics;
(3) identify structures and equipment used in producing greenhouse, ornamental, and nursery plants;
(4) determine greenhouse environmental controls;
(5) water and feed greenhouse plants;
(6) select and identify propagation media, nursery soils, compost, mulches, soil mixtures, fertilizers, and other growth materials;
(7) understand and perform the methods of propagation of plants;
(8) understand selection, breeding, and reproduction of plants;
(9) grow greenhouse plants;
(10) grow nursery stock and ornamentals in containers;
(11) develop and maintain the landscape and turf grasses;
(12) identify and control diseases, insects, organisms, and weeds;
(13) determine floral design accessories, arranging, and judging;
(14) calculate production costs;
(15) understand marketing, labeling, pricing, displaying, advertising, financial control, credit, records, and accounts; and
(16) select, operate, maintain, and repair horticultural tools and equipment.

(v) Agribusiness education. In addition to the course described in subsections (e)-(u) of this section, schools may offer agribusiness education in any of the occupations listed in this section or in those justified by employment needs through a cooperative arrangement. The following courses may be offered:

(1) plant scientist assistant;
(2) livestock auction employee;
(3) grain elevator employee;

(4) agricultural finance;
(5) horseshoer;
(6) animal caretaker employee;
(7) soil management employee;
(8) water management employee;
(9) agricultural welding and service;
(10) agricultural construction and maintenance employee;
(11) farm and ranch electrification employee;
(12) agricultural hand and power tools service;
(13) farm equipment operator;
(14) agricultural machinery parts employee;
(15) agricultural machinery service supervisor;
(16) nonfood products employee;
(17) fruit and vegetable packing plant processor;
(18) poultry products employee;
(19) dairy products employee;
(20) seafood processing employee;
(21) food processing employee;
(22) soil conservationist assistant;
(23) wildlife conservation employee;
(24) fish hatchery employee;
(25) game and hunting farm employee;
(26) recreation farm employee;
(27) logging employee;
(28) woods products employee;
(29) sawmill employee;
(30) cotton ginning employee;
(31) dairy farm worker;
(32) crop farm employee;
(33) irrigation equipment sales and service;
(34) horse farm employee;
(35) poultry hatchery employee;
(36) poultry processing plant employee;
(37) ranch employee;
(38) seed sales and service;
(39) swine farm employee;
(40) wool and mohair warehouse employee;
(41) VEH farm and ranch maintenance; and
(42) VEH horticulture related.

§75.83 *Consumer and Homemaking Education.*

(a) Comprehensive homemaking I (1 unit) shall be a laboratory-oriented course and shall include the following essential elements:

(1) Concepts and skills related to family living and parenthood. The student shall be provided opportunities to:

(A) develop self-awareness and positive self-direction;
(B) define developmental tasks of young persons moving toward adulthood;
(C) examine ways to develop and maintain mental health;

(D) prepare for the occupation of homemaking;
(E) develop an awareness of factors involved in marriage and family life;
(F) understand socially responsible behavior;
(G) identify factors which influence relationships with peers, children, and older adults;
(H) outline rights and responsibilities of family members and families;
(I) relate home economics skills to jobs and careers; and
(J) evaluate the effects of career choice on the family.

(2) Concepts and skills related to home management and consumer education. The student shall be provided opportunities to:
(A) identify the meaning and elements of management;
(B) develop a personal decision-making procedure;
(C) organize management of time, energy, and income; and
(D) explore related job opportunities.

(3) Concepts and skills for managing food and nutrition for the family. The student shall be provided opportunities to:
(A) analyze basic nutrition requirements;
(B) investigate management and consumer aspects of food and nutrition including sanitation and safety;
(C) plan, prepare, and serve simple, pleasing, and nutritious meals; and
(D) explore related job opportunities.

(4) Concepts and skills related to clothing and textiles. The student shall be provided opportunities to:
(A) analyze significance of clothing to individuals;
(B) recognize elements and principles of design as related to clothing;
(C) manage the consumer aspects of clothing;
(D) acquire skills in construction and alteration of simple garments; and
(E) explore job opportunities related to clothing and textiles.

(5) Child development concepts and skills. The students shall be provided opportunities to:
(A) evaluate care techniques which meet the basic needs of children including nutrition, health and safety, selection and care of clothing, housing, and various methods of guidance;
(B) analyze factors influencing the child's development;
(C) demonstrate ability to work effectively with children;
(D) analyze related job opportunities; and
(E) determine how the career choice of parents affects young children.

(6) Concepts and skills related to housing for the family. The student shall be provided opportunities to:
(A) analyze influences of housing on the family;
(B) identify human factors influencing housing;
(C) develop skills in management of the home including organization of tasks and safety; and
(D) explore related job opportunities.

(b) Comprehensive homemaking II (1 unit) shall be a laboratory-oriented course and shall include the following essential elements:

(1) Concepts and skills related to family living and parenthood. The student shall be provided opportunities to:
(A) develop skills for effective personal interaction in groups and with special individuals;
(B) analyze own development;
(C) identify adjustments of the single adult;
(D) identify adjustments necessitated by marriage;
(E) identify and evaluate the components of responsible parenthood;
(F) recognize support systems and services for families with small children;

(G) identify financial considerations involved in child care; and

(H) explore related job opportunities and recognize responsibilities of the dual role of homemaker and wage earner.

(2) Concepts and skills related to home management and consumer education. The student shall be provided opportunities to:

(A) analyze and evaluate decision-making procedures impacting on family use of all resources;

(B) analyze and evaluate management of household tasks for quality family living;

(C) develop consumer skills essential to satisfying family living; and

(D) explore related job opportunities.

(3) Child development concepts and skills. The student shall be provided opportunities to:

(A) relate principles of human development to the young child (infant through five years);

(B) prepare for parenthood;

(C) determine factors which contribute to the well-being of the mother and unborn child;

(D) develop skills in caring for infants and young children;

(E) assess expenses required during prenatal and postnatal period; and

(F) examine related job opportunities.

(4) Concepts and skills related to housing for the family. The student shall be provided opportunities to:

(A) explore and evaluate available types of housing and methods of financing;

(B) evaluate living space;

(C) identify principles of pleasing interior decoration;

(D) explore principles and costs of home renovation;

(E) identify competencies needed for related job opportunities; and

(F) investigate selection, use, and care of home furnishings and equipment.

(5) Concepts and skills related to food and nutrition for the family. The student shall be provided opportunities to:

(A) analyze factors affecting family food and health;

(B) recognize available consumer protection;

(C) develop a management plan for planning, preparing, serving, and evaluating total meals for a family; and

(D) identify competencies needed for related job opportunities.

(6) Concepts and skills related to clothing and textiles. The student shall be provided opportunities to:

(A) develop a decision-making process for individual and family clothing decisions;

(B) investigate and evaluate clothing care procedures;

(C) improve skills in clothing construction or alterations;

(D) develop skills in selecting or constructing children's clothing; and

(E) identify competencies needed for related job opportunities.

(c) Comprehensive homemaking III (1 unit) shall be a laboratory-oriented course and shall include the following essential elements:

(1) Concepts and skills related to family living. The student shall be provided opportunities to:

(A) analyze family-related laws;

(B) investigate possible adjustments at each stage of the family life cycle;

(C) examine available support systems at each stage of the life cycle;

(D) manage family problems and crises;

(E) refine interpersonal skills needed for job success;

(F) examine the interrelationship of employment and home life; and

(G) identify related career ladders.

(2) Concepts and skills related to home management and consumer education. The student shall be provided opportunities to:

(A) identify changing management patterns throughout the family life cycle;
(B) investigate community resources related to family management;
(C) explore ways to achieve financial security; and
(D) explore related careers and job opportunities.

(3) Concepts and skills related to child development. The student shall be provided opportunities to:

(A) evaluate physical, cognitive, social, emotional, and personality development of the school-age child;
(B) recognize needs of exceptional children;
(C) identify principles and methods of effective guidance;
(D) investigate causes and solutions to the problem of child abuse;
(E) assess child care alternatives;
(F) identify and evaluate community resources related to the school-age child; and
(G) examine related professional job and career opportunities.

(4) Concepts and skills related to housing the family. The student shall be provided opportunities to:

(A) examine the environmental factors affecting housing needs throughout the life cycle;
(B) explore and evaluate a variety of options for housing the family;
(C) develop consumer techniques for selecting and purchasing home furnishings and equipment;
(D) investigate home maintenance responsibilities; and
(E) explore related professional careers and job opportunities.

(5) Concepts and skills related to food and nutrition. The student shall be provided opportunities to:

(A) explore current and future food trends;
(B) develop techniques for arranging and evaluating work areas;
(C) investigate selection, use, care, and cost of major kitchen equipment;
(D) identify reasons and methods to modify food habits;
(E) identify and evaluate scientific and creative aspects of meal planning and management;
(F) analyze foods to meet special health needs; and
(G) explore professional careers related to food and nutrition.

(6) Concepts and skills related to clothing and textiles. The student shall be provided opportunities to:

(A) evaluate factors influencing family clothing decisions at various stages in life cycle;
(B) explore the basic facets of the clothing industry;
(C) develop skills in textile identification, care, and use in design;
(D) develop advanced clothing construction skills; and
(E) explore related professional careers.

(d) Home and family living (½ unit) shall include the following essential elements:

(1) Concepts related to individual development. The student shall be provided opportunities to:

(A) analyze individual needs at various stages of development;
(B) develop appreciation of self, family, and peers; and
(C) apply management principles to personal life.

(2) Concepts related to preparation for adult living. The student shall be provided opportunities to:

(A) develop effective interaction skills in groups and with special individuals;
(B) identify adjustments of the single adult;
(C) recognize commitments made in marriage vows;
(D) identify adjustments necessitated by marriage; and
(E) weigh options for the immediate future.

(3) Concepts and skills related to responsible parenthood. The student shall be provided opportunities to:

(A) examine qualities needed by parents;
(B) determine financial considerations related to children;

(C) identify potential emotional effects of parenthood;
(D) identify and evaluate the components of responsible parenthood; and
(E) examine special parenting situations and utilize community resources.

(4) Concepts related to analyzing factors which contribute to a successful family life. The student shall be provided opportunities to:

(A) analyze factors affecting relationships within the family;
(B) determine rights and responsibilities of family members;
(C) identify the basic functions of a family;
(D) identify the family members as managers and consumers and understand their responsibilities in these roles;
(E) recognize the importance of planned spending and determining a plan for the individual needs of family members;
(F) investigate laws related to the family;
(G) analyze the impact of change on families; and
(H) understand the multiple roles of homemaker-wage earner.

(5) Concepts related to family life cycle. The student shall be provided opportunities to:

(A) outline the functions of the family at each stage of the family life cycle;
(B) identify possible adjustments, problems, and rewards at each stage of the family life cycle; and
(C) identify support systems and services available to families.

(6) Concepts and skills related to family crisis. The student shall be provided opportunities to:

(A) identify crises families may face;
(B) analyze family problems, crises, and methods of prevention; and
(C) determine methods for coping with family problems and crises.

(7) Concepts related to career and job. The student shall be provided opportunities to:

(A) develop interpersonal skills needed for job success;
(B) examine job and career opportunities related to family living; and
(C) determine the interrelationship of employment and home life and the implication for satisfaction in both arenas.

(e) Clothing and textiles (½ unit) shall be a laboratory-oriented course and shall include the following essential elements:

(1) Concepts and skills affecting family clothing decisions. The student shall be provided opportunities to:

(A) identify factors affecting decisions;
(B) locate possible resources for effective decision making; and
(C) develop a procedure for family decision making.

(2) Concepts and skills for consumer buying. The student shall be provided opportunities to:

(A) investigate the effects of advertising and labeling on consumer choice;
(B) identify consumer protection agencies and their services;
(C) define effective standards for consumer buying; and
(D) identify and practice principles for good decision making.

(3) Concepts related to the fashion industry. The student shall be provided opportunities to:

(A) identify the different types of businesses in the clothing fashion industry;
(B) recognize factors influencing the clothing fashion industry; and
(C) identify ways the industry affects the national economy.

(4) Concepts and skills of clothing management. The student shall be provided opportunities to:

(A) determine the role and principles of effective wardrobe planning;
(B) practice effective principles of wardrobe planning;
(C) evaluate various clothing-care products; and

(D) learn to use major clothing equipment aids.

(5) Concepts and skills for selecting textiles. The student shall be provided opportunities to:

(A) identify fiber characteristics;

(B) recognize fabric construction and finishes;

(C) identify effective usage of label information and its application; and

(D) investigate employment skills needed in fabric business.

(6) Concepts and skills for advanced clothing construction. The student shall be provided opportunities to:

(A) define the principles of design;

(B) demonstrate ways of adapting clothing designs to individuals;

(C) evaluate creative clothing designs for specific individuals;

(D) identify and use methods of pattern alteration;

(E) apply principles for altering a ready-made garment; and

(F) identify and apply principles of advanced sewing construction skills.

(7) Concepts and skills affecting individual clothing decisions. The student shall be provided opportunities to identify the effects of clothing on an individual assuming the dual role of homemaker and wage earner.

(8) Concepts of career and job opportunities for gainful employment. The student shall be provided opportunities to:

(A) identify entry-level, skilled, and professional and technical opportunities for employment in the fabric and fashion industries;

(B) identify skills and competencies needed for employment; and

(C) identify sources of further education required for employment.

(f) Child development (½ unit) shall include the following essential elements:

(1) Concepts related to preparation for parenthood. The student shall be provided opportunities to:

(A) identify tasks and responsibilities of parents;

(B) learn consumer considerations for babies such as equipment, clothing, medical expenses, insurance, and child care; and

(C) identify and evaluate the emotional factors related to parenting.

(2) Concepts and skills related to prenatal and postnatal care. The student shall be provided opportunities to:

(A) investigate the principles of prenatal and neonatal development; and

(B) identify neonatal care essential to the well-being of mother and child.

(3) Concepts and skills in evaluation of child's development. The student shall be provided opportunities to:

(A) understand principles of child development and relate them to specific children;

(B) identify influences on development of children;

(C) analyze factors related to physical, motor, intellectual, emotional, moral, and social development;

(D) determine factors affecting the development of exceptional children;

(E) analyze whether one's characteristics are a result of heredity or environment, or both; and

(F) recognize the importance of nurturance to the development of a child.

(4) Concepts and skills related to child care techniques. The student shall be provided opportunities to:

(A) apply basic needs of individuals to the care of young children; and

(B) identify the role of play in learning.

(5) Concepts and skills related to selection and use of appropriate child guidance techniques. The student shall be provided opportunities to:

(A) analyze methods of guidance and determine effectiveness of these methods; and

(B) assess society's role in protecting the rights of children.

(6) Concepts and skills in analyzing career and job opportunities related to the field of child development. The student shall be provided opportunities to:

(A) explore careers in child care and competencies needed by personnel;

(B) relate child development skills to other occupations; and

(C) identify educational preparation.

(g) Consumer education (½ unit) shall include the following essential elements:

(1) Concepts and skills related to allocation of resources. The student shall be provided opportunities to:

(A) understand the purposes of and factors involved in management;

(B) develop and use the decision-making process;

(C) organize personal budget to fit needs of individual and family;

(D) explore types of savings and investment plans available to consumers; and

(E) learn types of credit, insurance, social security, and taxes.

(2) Concepts and skills related to consumer buying. The student shall be provided opportunities to:

(A) determine factors which influence consumer purchasing;

(B) identify principles of consumer purchasing;

(C) determine factors influencing housing choices;

(D) explore housing alternatives;

(E) evaluate housing to meet family needs;

(F) determine how to buy and maintain automotive products and services;

(G) understand the significance of consumerism as it relates to food, meal planning, and food technology; and

(H) identify clothing needs and ways to budget and purchase clothes for family members.

(3) Concepts and skills related to consumer citizenship. The student shall be provided opportunities to:

(A) understand the government legislation affecting consumers;

(B) identify the rights and responsibilities of a consumer;

(C) recognize types of fraudulent and deceptive practices; and

(D) understand action a consumer may take for protection against fraudulent and deceptive practices.

(4) Concepts and skills related to the role of the consumer and the economy. The student shall be provided opportunities to:

(A) describe the role of the federal government in the American economy;

(B) explain how the American market system functions; and

(C) understand banking services and how they assist consumers in protecting money and other valuables.

(5) Concepts and skills related to career and job opportunities. The student shall be provided opportunities to:

(A) explore careers related to consumer education;

(B) determine skill and competencies needed for employment and the education necessary to perform job tasks related to consumerism; and

(C) recognize procedures to combine successfully roles of homemaker and wage earner.

(h) Food and nutrition (½ unit) shall be a laboratory-oriented course and shall include the following essential elements:

(1) Concepts related to the significance of food. The student shall be provided opportunities to:

(A) determine factors affecting food habits;

(B) identify social, cultural, and aesthetic values of food; and

(C) identify local, state, and federal nutrition programs.

(2) Concepts and skills of food buying. The student shall be provided opportunities to:

(A) identify the effects of advertising, consumer agencies, and other resources on food buying;

(B) practice principles of wise use of available resources; and
(C) develop a procedure using good consumer practices in the marketplace.

(3) Concepts and skills of kitchen planning and management. The student shall be provided opportunities to:
(A) identify principles for establishing effective work areas;
(B) determine major and minor equipment needs;
(C) identify and practice principles of equipment care and repair;
(D) identify factors affecting cost;
(E) evaluate equipment cost vs. equipment features; and
(F) identify and practice safety procedures in the kitchen.

(4) Concepts and skills related to nutrition of the family. The student shall be provided opportunities to:
(A) identify the effects of nutrition on the body's digestion, absorption, and utilization;
(B) determine energy needs of the body as they affect weight;
(C) analyze classification of nutrients, characteristics, sources, and functions;
(D) investigate chemical and physical properties of foods;
(E) relate nutrition principles to effective parenting skills;
(F) recognize food fads, fallacies, and facts;
(G) analyze and use reliable sources of information;
(H) evaluate effective nutrition practices; and
(I) modify personal nutrition practices.

(5) Concepts and skills of meal planning and management. The student shall be provided opportunities to:
(A) investigate scientific and creative aspects of planning, preparing, and serving meals;
(B) identify foods required to meet special needs; and
(C) identify and use methods for food conservation and preservation.

(6) Concepts of career and job opportunities. The student shall be provided opportunities to:
(A) explore opportunities for related paid employment;
(B) identify concepts and skills needed for employment; and
(C) determine educational preparation needed.

(i) Home management (½ unit) shall include the following essential elements:

(1) Concepts and skills related to personal and family living. The student shall be provided opportunities to:
(A) explain the role of management in reaching dual and family goals;
(B) compare human and nonhuman resources and identify ways to utilize them; and
(C) establish personal priorities.

(2) Concepts and skills related to management process. The student shall be provided opportunities to:
(A) understand steps in decision making;
(B) identify types of decisions and factors affecting choices;
(C) learn to adapt to change in today's society; and
(D) apply management skills to achieve personal and family goals.

(3) Skills related to managing a home. The student shall be provided opportunities to:
(A) select a home to meet the psychological and sociological needs of the individual;
(B) understand how to select home furnishings and equipment;
(C) expand knowledge of food resources;
(D) identify alternate approaches for resolving problems of food management;
(E) recognize the importance of achieving family goals as a group;
(F) identify multiple roles of family members;
(G) determine physical and psychological needs of children;

(H) plan for family clothing needs; and

(I) investigate transportation needs and alternatives.

(4) Concepts and skills related to managing as consumers. The student shall be provided opportunities to:

(A) know sources of family income and variations that occur during family life cycle;

(B) examine reasons for planning, developing, and evaluating a spending plan;

(C) identify various family securities and ways families can be financially secure; and

(D) understand the rights and responsibilities of consumers.

(5) Concepts and skills related to daily living. The student shall be provided opportunities to:

(A) develop an awareness of clothing expenditures and ways to eliminate overspending;

(B) develop a procedure for buying food;

(C) plan a food budget;

(D) learn the facts about comparative shopping and available consumer protection;

(E) identify transportation expenditures and explore alternatives;

(F) recognize the importance of family recreation and leisure time and the need to allocate time and money for these activities; and

(G) understand the various housing options including the cost and methods of financing.

(6) Concepts related to career and job opportunities pertaining to home management. The student shall be provided opportunities to:

(A) develop skills and competencies needed for job success;

(B) identify semiprofessional, professional, skilled and technical jobs related to home management;

(C) determine the interrelationship of employment and home life and the implication for satisfaction in both areas; and

(D) identify family members' responsibilities in the management of earnings.

(j) Family/Individual Health (½ unit) shall include the following essential elements:

(1) Concepts and skills related to personal health. The student shall be provided opportunities to:

(A) identify characteristics of a healthy person; and

(B) promote principles of good personal health.

(2) Concepts and skills related to family health protection. The student shall be provided opportunities to:

(A) identify management principles for family health and safety;

(B) determine factors influencing family health decisions; and

(C) explore ways to adjust to family health problems.

(3) Concepts of public health. The student shall be provided opportunities to:

(A) identify major health concerns;

(B) explore factors contributing to world health problems;

(C) identify public health organizations;

(D) evaluate situations affecting community health;

(E) explore community health measures;

(F) determine methods for providing a safe environment; and

(G) become aware of available community resources.

(4) Concepts for the well-being of mother and infant. The student shall be provided opportunities to:

(A) define principles involved in preparing for children;

(B) identify principles of neonatal care;

(C) identify principles of care of the mother; and

(D) identify principles of care of the growing infant.

(5) Concepts for meeting needs in later years. The student shall be provided opportunities to:

(A) understand the aging process;

(B) identify health, safety, and clothing needs; and

(C) explore the personal needs of the aged.

(6) Concepts and skills of home care of the sick. The student shall be provided opportunities to:

(A) explore the causes, symptoms, transmission, and prevention of communicable diseases;

(B) identify the principles for proper care of the sick;

(C) determine recreation activities for the sick;

(D) evaluate principles and methods for patient care skills; and

(E) investigate alternatives to home health care.

(7) Concepts and skills for meeting emergencies. The student shall be provided opportunities to:

(A) identify home emergencies;

(B) determine simple first aid principles to be used in the home; and

(C) locate community resources for assistance in emergencies.

(8) Concepts and skills related to gainful employment. The student shall be provided opportunities to:

(A) relate home nursing to careers and job opportunities;

(B) determine needed skills and competencies; and

(C) identify educational methods for occupation preparation.

(k) Housing and home furnishings (½ unit) shall include the following essential elements:

(1) Concepts related to the basic functions of housing. The student shall be provided opportunities to:

(A) identify methods of meeting physical and emotional needs of the family; and

(B) recognize the importance of housing as related to protection, privacy, and self-expression.

(2) Concepts and skills related to the influence of home environment on the family. The student shall be provided opportunities to:

(A) explore the relationship of housing conditions to health and safety;

(B) identify principles which satisfy the psychological needs and well-being of family members;

(C) define influences of housing on social and emotional development;

(D) determine the effect of the environment on the intellectual growth and development of family members;

(E) explore economical methods for families to satisfy their housing needs and wants; and

(F) determine how housing is influenced by economic changes.

(3) Concepts and skills related to factors influencing housing and home furnishings decisions. The student shall be provided opportunities to:

(A) identify human factors such as life style and stage in life cycle which may influence decisions; and

(B) explore housing alterations to meet special requirements needed by the disabled, very young, or the very old family member.

(4) Concepts related to housing trends in the future. The student shall be provided opportunities to:

(A) identify the effects of populations;

(B) analyze the effects of pollution on future housing;

(C) determine and evaluate housing alternatives; and

(D) examine the effects of the housing industry on the nation's economy and vice versa.

(5) Concepts and skills for evaluating housing. The student shall be provided opportunities to:

(A) identify principles of decision making related to housing choices;

(B) determine the role of personal satisfaction in housing decisions;

(C) explore the importance of a home's comfort, floor arrangement, and appearance to satisfying home life;

(D) identify principles of construction;

(E) evaluate architectural styles, construction, and decorative treatment; and

(F) determine the importance of housing location and safety.

(6) Concepts and skills of management and consumer aspects. The student shall be provided opportunities to:

(A) define legal and financial aspects of housing;
(B) evaluate methods for financing homes;
(C) explore general considerations in housing, home furnishings, and interior design;
(D) identify and practice principles of interior design and household textiles;
(E) analyze the cost of establishing a home;
(F) explore methods of securing and financing needed furnishings;
(G) identify good consumer buying practices related to home furnishings;
(H) define elements of furniture design;
(I) explore methods of promoting creativity in the home;
(J) identify principles of satisfactory storage;
(K) identify principles used for selection and care of equipment and furniture;
(L) analyze room plans and furniture arrangement to meet a variety of needs;
(M) identify principles involved in home maintenance; and
(N) identify principles of safety to be used in the home.

(7) Concepts and skills related to gainful employment. The student shall be provided opportunities to:

(A) relate home furnishings to career and job opportunities;
(B) determine needed skills and competencies; and
(C) identify educational methods for preparation.

§75.84 *Health Occupations Education.*

(a) Health care science (1 unit) shall include the following essential elements:

(1) Concepts and skills necessary for entering a health care specialty. The student shall be provided opportunities to:

(A) develop concepts of good interpersonal and patient relationships;
(B) demonstrate ability to identify health care specialties;
(C) describe or practice the elements of a safe working environment;
(D) recognize the importance of neatness and cleanliness;
(E) identify ethical procedures and behavior of the health care delivery system;
(F) describe legal responsibilities of the health care worker;
(G) demonstrate the knowledge and practice of medical aseptic techniques;
(H) demonstrate basic first aid procedures;
(I) perform CPR;
(J) demonstrate proper technique for taking vital signs;
(K) develop an understanding of the anatomical physiology as it relates to vital signs;
(L) develop an understanding of the eight basic body systems and the most common diseases related to each; and
(M) demonstrate proper body mechanics.

(2) Concepts and skills necessary for successful employment in health care. The student shall be provided opportunities to:

(A) identify roles of health care workers;
(B) develop an awareness of the hierarchy and chain of command in the health care delivery system;
(C) develop money management skills;
(D) identify basic terminology, including abbreviations, prefixes, suffixes, and root words common to the health care delivery system;
(E) develop an awareness of communication systems utilized by the health care delivery system;
(F) identify the essential elements of good telephone techniques; and

(G) identify elements of the metric system.

(3) Concepts and skills necessary to the specific occupation being taught. The student shall be provided opportunities to master basic entry-level skills necessary for employment in a health occupation.

(b) Health occupations education I (2-3 units). For students who have not taken health care science, the essential elements of health care science must be incorporated into the essential elements of health occupations I. Health occupations education I shall include the following essential elements:

(1) Concepts and skills necessary for entering a health care specialty. The student shall be provided opportunities to:

(A) apply concepts of good interpersonal and patient relationship;

(B) demonstrate ability to identify responsibilities of individual health care specialties;

(C) recognize skills and educational requirements for entrance into selected health care specialties;

(D) maintain safe conditions for patients, co-workers, and self;

(E) maintain good grooming and personal hygiene;

(F) recognize the need for ethical practice;

(G) practice ethical procedures and behavior in the workplace;

(H) describe specific legal responsibilities of the health care worker in an identified health care occupation;

(I) recognize the importance of medical asepsis;

(J) demonstrate aseptic techniques;

(K) evaluate emergency situations;

(L) perform current CPR techniques;

(M) identify normal parameters of vital signs;

(N) recognize anatomy, physiology, and pathophysiology basic to the body systems;

(O) demonstrate isolation procedure; and

(P) develop an awareness of community health agencies.

(2) Concepts and skills necessary for successful employment in health care. The student shall be provided opportunities to:

(A) identify factors that establish effective employeremployee relationships;

(B) identify responsibilities to employer and co-workers;

(C) utilize basic terminology relevant to the health care delivery system;

(D) demonstrate good telephone techniques on the job;

(E) identify communication equipment specific to the chosen occupation;

(F) utilize metric system in computing weights and measures; and

(G) demonstrate conversion of temperature, weights and measures to metric systems.

(3) Concepts and skills necessary to the specific occupation being taught. The student shall be provided opportunities to practice entry-level skills in specific health occupation in which student is employed.

(c) Health occupations education II (2-3 units) shall include the following essential elements:

(1) Concepts and skills necessary for entering a health care specialty. The student shall be provided opportunities to:

(A) demonstrate understanding of human behavior;

(B) expand awareness of skills and education requirements for entrance into individual health care specialties;

(C) develop safe conditions for patients, co-workers, and self relative to specific job assignment;

(D) instruct others in maintaining safe environmental conditions;

(E) maintain good grooming and personal hygiene;

(F) apply ethical procedures and behavior in the workplace;

(G) identify standards of practice for licensed health care personnel;

(H) demonstrate knowledge and importance of peer review and evaluation;
(I) comprehend concepts of infection control in a health facility;
(J) utilize aseptic techniques in caring for patients in isolation and reverse isolation situations;
(K) utilize appropriate first aid measures in emergency situations;
(L) perform current CPR techniques;
(M) recognize the reasons for and the importance of vital signs deviations;
(N) evaluate vital signs of patient;
(O) recognize the health factors related to environmental protection;
(P) identify the populations served by the community health agencies; and
(Q) recognize anatomical and physiological abnormalities.

(2) Concepts and skills necessary for successful employment in health care. The student shall be provided opportunities to:
(A) determine most effective means of establishing good employer-employee relations;
(B) identify assertive qualities;
(C) recognize the qualities of effective leadership in the workplace;
(D) utilize terminology specific to the selected health occupation;
(E) demonstrate effective use of communication equipment employed by the student in the workplace;
(F) demonstrate knowledge of "normal" body temperatures, weights and measures in metrics; and
(G) demonstrate conversion of the apothecary system to the metric system.

(3) Concepts and skills necessary to the specific occupation being taught. The student shall be provided opportunities to:
(A) display knowledge and skills necessary to perform effectively all the tasks defined in the individual course descriptions provided; and
(B) demonstrate knowledge of the theory of bio-psycho-sociallinguistic health care.

(d) Central-supply aide (2-3 units) shall include the health occupations core and the concepts and skills associated with central supply. The student shall be provided opportunities to:
(1) scrub and wash surgical instruments, containers, syringes, and equipment such as aspirators, croupettes, and oxygen suppliers;
(2) sterilize instruments, equipment, surgical linens, and supplies such as surgical packs, treatment trays, and syringes, using autoclave, water sterilizer, or antiseptic solutions;
(3) prepare packs of supplies and instruments and dressing and treatment trays, according to designated lists or codes, including wrapping, labelling, and sealing packs;
(4) sharpen hypodermic needles using hone or abrasive wheel;
(5) match syringe barrels and plungers, according to size, trade names, or serial number;
(6) store prepared articles and supplies in designated areas of central supply;
(7) fill requisitions, write charges, and inventory supplies;
(8) prepare solutions according to prescribed formula;
(9) distribute stock supplies to proper departments; and
(10) develop concepts of "dirty" and "clean" rooms and supplies.

(e) Dental assistant (2-3 units) shall include the health occupations core and the concepts and skills associated with dental assisting. The student shall be provided opportunities to:
(1) perform chairside assisting duties;
(2) recognize the pathophysiology of the oral cavity;
(3) practice and demonstrate proper dental terminology;
(4) provide diagnostic aids including exposing, developing, and mounting radiographs, taking and recording medical and dental histories, and taking and recording vital signs;
(5) mix and pour preliminary impressions for study casts and make occlusal registrations for mounting study models;

(6) perform clinical supportive functions including preparing and dismissing patients and providing postoperative instructions prescribed by the dentist;

(7) assist the dentist in management of medical and dental emergencies;

(8) assist in maintaining patient treatment records, operatory equipment, and instruments;

(9) perform such laboratory procedures as pouring, trimming, and polishing study casts; fabricating custom impression trays from preliminary impressions; cleaning and polishing removable appliances; and fabricating temporary restorations;

(10) provide oral hygiene instruction such as conducting plaque control program;

(11) perform basic business office procedures, including maintaining appointment control, receiving payment for dental services, and inventory control;

(12) sterilize and disinfect instruments and equipment;

(13) prepare tray setups for dental procedures;

(14) demonstrate a knowledge of the anatomy and physiology of the oral cavity; and

(15) assist in preparing anesthetics for administration.

(f) Dental laboratory aide (2-3 units) shall include the health occupations core and the concepts and skills associated with the occupation of dental laboratory aide. The student shall be provided opportunities to:

(1) practice safety measures which pertain to casting, polishing, and finishing processes;

(2) read prescription and examine models and impressions to determine type of denture to be made or repaired;

(3) apply knowledge of oral anatomy and restoration procedures;

(4) position teeth in wax model in specified plane of occlusal harmony;

(5) mold wax around base of teeth and verify accuracy of occlusion, using articulator;

(6) mold wax over denture setup to form contours of gums, using laboratory knives and spatula;

(7) remove plastic particles and excess plastic from surfaces of cast dentures using bench lathe equipped with grinding and buffing wheels;

(8) cast plaster models of dentures to be repaired; select and mount replacement teeth in model to match color and shape of natural or adjacent teeth, using color chart and tooth illustrations;

(9) fill cracks and separations in dentures;

(10) rebuild denture linings according to specifications;

(11) utilize appropriate materials and equipment to cast reproductions of gums;

(12) cure denture plastic in pressure pot or oven;

(13) test repaired dentures for accuracy of occlusion, using articulator;

(14) polish metal, plastic, and porcelain surfaces to specified finish;

(15) bend and solder gold and vitalium wire to construct wire frames for partials;

(16) fabricate dental castings using the appropriate process; and

(17) confer with dentist to resolve problems in design and setup of dentures.

(g) Diet clerk (2-3 units) shall include the health occupations core and the concepts and skills associated with the occupation of diet clerk. The student shall be provided opportunities to:

(1) assist in the preparation of food;

(2) apply knowledge of food handling regulations;

(3) examine diet order received from wards and tally portions and foods for all diets;

(4) mark tally figures on master menu to inform kitchen personnel of food requirements;

(5) process new diets and changes as required;

(6) tally quantities of specific foods such as vegetables and meats to be prepared in kitchen;

(7) type menus, discharge diets, and diet-tray cards;

(8) maintain records and prepare reports on perpetual inventory, food purchases, meals served, and food costs;

(9) develop and understand the basic four food groups and how they interrelate for total nutrition;
(10) convert the foods on the exchange list to maintain good nutrition according to the patient's preferences as related to the prescribed diets;
(11) mix liquid diets as prescribed;
(12) differentiate between special diets and exhibit knowledge of pathophysiology requiring these diets;
(13) prepare trays on serving lines; and
(14) distribute trays to patients.

(h) Electrocardiograph technician (2-3 units) shall include the health occupations core and the concepts and skills associated with the occupation of electrocardiograph technician. The student shall be provided opportunities to:
(1) prepare patient for procedure;
(2) attach electrodes to specified areas of patient's body;
(3) turn selector switch and move chest electrode to successive positioning across chest to record electromotive variations occurring in various areas of heart muscle;
(4) press button to mark tracing paper to indicate positions of chest electrodes;
(5) replenish supply of paper and ink in machine and report malfunctions;
(6) edit and mount final results and forward results to cardiologist for analysis and interpretation;
(7) apply knowledge of normal and abnormal placing by observing tracing;
(8) maintain, store, clean, and supply EKG equipment;
(9) assist with tests and procedures to determine patient's activity level;
(10) develop a knowledge of the theory and practicum of taking an EKG;
(11) position patients to obtain an accurate EKG;
(12) care for the patient following the procedure; and
(13) show a knowledge of safety in utilizing electrical equipment.

(i) Home health aide (2-3 units) shall include the health occupations core and the concepts and skills associated with the occupation of home health aide. The student shall be provided opportunities to:
(1) bath, dress, and undress patients;
(2) serve and feed patients requiring help;
(3) transport patients to treatment units, using wheelchair or wheeled carriage, or assist them to walk;
(4) drape patients for examinations and treatment, and remain with patients, performing such duties as holding instruments and adjusting lights;
(5) dust and clean patients' rooms;
(6) change bed linens, run errands, and answer telephone;
(7) take and record temperature, pulse and respiration rates, and food and liquid intake and output, as directed;
(8) apply compresses and hot water bottles;
(9) massage patient and apply preparations and treatments;
(10) administer prescribed oral medications under written directions of physician or as directed by home care nurse;
(11) accompany patient outside home; and
(12) entertain patient.

(j) Medical laboratory aide (2-3 units) shall include the health occupations core and the concepts and skills associated with the occupation of medical laboratory aide. The student shall be provided opportunities to:
(1) mix water and detergents or acids in container to prepare cleaning solution according to specifications;
(2) wash, rinse, and dry glassware and instruments, using water, acetone bath, and cloth, or hot-air dryer;

(3) scrub walls, floors, shelves, tables, and sinks, using cleaning solution and brush;
(4) sterilize glassware and instruments, using autoclave;
(5) fill tubes and bottles with specified solutions and apply identification labels;
(6) label and file microscope slides;
(7) arrange specimens and samples on trays to be placed in incubators and refrigerators;
(8) deliver supplies and laboratory specimens to designated work areas, using handtruck;
(9) supply laboratory with distilled water;
(10) perform routine tests in medical laboratory under supervision of medical technologist or other qualified individual, utilizing prescribed procedures in urinalysis, hematology, serology, and bacteriology; and
(11) develop an awareness of tissue slide preparation.

(k) Medical office assistant aide (2-3 units) shall include the health occupations core and the concepts and skills associated with the occupation of medical office assistant aide. The student shall be provided opportunities to:
(1) prepare treatment rooms for examination of patient;
(2) drape patients and position instruments and equipment;
(3) hand instruments and materials to doctor as directed;
(4) sterilize and clean instruments;
(5) prepare inventory and replenish supplies;
(6) assist with charting procedures;
(7) interview patients, collect historical data, check vital signs, and obtain weight and height;
(8) administer selected treatments and medications under the direct supervision of a physician;
(9) assist in laboratory;
(10) operate equipment and assist in laboratory;
(11) perform clerical and secretarial tasks including scheduling appointments;
(12) maintain radiographs and other medical records;
(13) receive payments, complete insurance forms, and maintain financial records; and
(14) care for patients after examination.

(l) Nursing assistant (2-3 units) shall include the health occupations core and the concepts and skills associated with the occupation of nursing assistant. The student shall be provided opportunities to:
(1) answer signal lights and bells to determine patients' needs;
(2) bathe, dress, and undress patients;
(3) serve and collect food trays;
(4) record quantity consumed;
(5) assist and feed patients as required;
(6) transport patients to treatment units, using wheelchair or wheeled carriage, or assist them to walk;
(7) drape patients for examinations and treatments, remain with patients, and perform such duties as holding instruments and adjusting lights;
(8) change bed linens and direct visitors;
(9) take and record vital signs;
(10) apply compresses and hot water bottles under supervision;
(11) measure and record liquid intake and output;
(12) admit and dismiss patients;
(13) observe patients and report changes;
(14) demonstrate competency in administering treatments after proper instruction;
(15) care for personal needs of patients;
(16) collect and label specimens; and
(17) distribute water and nourishments.

(m) Nursing assistant, radiology (2-3 units) shall include the health occupations core and the concepts and skills associated with the occupation of nursing assistant, radiology department. The student shall be provided opportunities to:

(1) transport patients to treatment units, using wheelchair or wheeled carriage, or assist them to walk;
(2) assist with robing and disrobing patients;
(3) position and drape patients as directed by radiologist;
(4) change linen and clean room;
(5) record pertinent information in the patient's chart;
(6) adjust immobilization devices as directed by radiologist;
(7) develop radiographs;
(8) maintain inventory and supplies as directed;
(9) prepare and maintain work area;
(10) distribute radiograph reports to the appropriate unit for placement on the chart; and
(11) prepare selected radiopaque material as directed for administration to the patient.

(n) Nursing assistant, respiratory therapy (2-3 units) shall include the health occupations core and the concepts and skills associated with the occupation of nursing assistant, respiratory therapy department. The student shall be provided opportunities to:

(1) assist in setting up equipment such as respirators, mechanical ventilators, and therapeutic gas administration apparatus;
(2) assist the patient to perform breathing exercises;
(3) clean and sterilize equipment;
(4) assist in the maintenance of equipment;
(5) record pertinent information in the patients' charts;
(6) maintain inventory and supplies as directed;
(7) prepare and maintain work areas;
(8) assist with pulmonary function tests;
(9) assist with arterial blood gas preparation, procedure and analysis;
(10) distribute and adjust oxygen setups; and
(11) record and file daily patient charges.

(o) Physical therapy aide (2-3 units) shall include the health occupations core and the concepts and skills associated with the occupation of physical therapy aide. The student shall be provided opportunities to:

(1) assist patient to robe and disrobe;
(2) assist with supportive devices;
(3) position patient for treatments, tests, and evaluations;
(4) secure patient into or onto therapy equipment;
(5) administer routine treatments such as hydrotherapy, hot and cold packs, and paraffin bath;
(6) safeguard, motivate, and assist patients practicing exercises and functional activities;
(7) observe patients during treatments and report signs of fatigue, distress, or other problems;
(8) transport patients to and from treatment areas and transfer patients between conveyances and treatment equipment, using transfer techniques appropriate to patient's condition;
(9) change linen and arrange treatment supplies and equipment according to standard procedures or written or oral instructions; and
(10) clean work area and equipment after treatment.

(p) Surgical technician aide (2-3 units) shall include the health occupations core and the concepts and skills associated with the occupation of surgical technician aide. The student shall be provided opportunities to:

(1) wash, shave, and sterilize operative area of patient;
(2) scrub hands and don cap, mask, gown, and rubber gloves;
(3) aid team to don gowns and gloves;
(4) maintain specified supply of such fluids as saline and intravenous fluids for use during operation;
(5) adjust lights and other equipment as directed;
(6) wash and sterilize used equipment, using germicides, autoclave, and sterilizer;
(7) clean operating room;
(8) transport to and from operative area;
(9) wash and sort instruments to be sterilized; and
(10) make up surgical packs.

(q) Health occupations education. In addition to the courses described in subsections (a) - (p) of this section, schools may offer health occupations education in any of the occupations listed in this subsection or in those justified by employment needs through a cooperative arrangement. The following may be offered:
(1) biomedical instrument aide;
(2) electroencephalogram aide;
(3) emergency medical aide;
(4) environmental health aide;
(5) hospital entrance aide;
(6) mental health aide;
(7) medical-record clerk;
(8) orthopedic appliance aide;
(9) orthotics aide;
(10) optometric aide;
(11) occupational therapy aide;
(12) pharmacy aide; and
(13) ward clerk.

§75.85 *Industrial Arts Education.*

(a) General industrial arts (½-1 unit) is designed for students who have not had introductory industrial arts in the middle school. The program structure and content for general industrial arts are the same as in introductory industrial arts with the exception that it is only a one-year program. The high school common core is utilized rather than the middle school core. Teaching strategies for this course are modified to accommodate the high school student. Industrial arts courses grades 9-12 shall include the essential elements in this subsection which shall be common to all programs.
(1) Concepts and skills in the applications of safety procedures. The student shall be provided opportunities to:
(A) demonstrate safe operation of selected tools and equipment;
(B) maintain safe conditions in laboratories; and
(C) evaluate laboratories and facilities for unsafe conditions.
(2) Concepts and skills in planning, designing, and problem solving. The student shall be provided opportunities to:
(A) plan and design industrial products of the student's choice;
(B) apply problem-solving techniques to the design process;
(C) complete itemized list of materials; and
(D) prepare working drawings using standard symbols and conventions.
(3) Concepts and skills related to evaluating products and services of technology. The student shall be provided opportunities to:
(A) recognize good design and construction;

(B) practice evaluation of products based on given standards or applications;
(C) practice the servicing of industrial products and equipment;
(D) develop criteria for selecting, purchasing, and contracting services, and
(E) relate wise consumer choices to the free enterprise system.

(4) Concepts and skills involving the tools, materials, and processes used in technology. The student shall be provided opportunities to:

(A) become proficient in the use of applicable tools, machines, and equipment;
(B) understand the properties of a wide range of industrial materials through testing;
(C) gain familiarity with the processes of various technologies; and
(D) practice conservation and recycling of industrial materials.

(b) General drafting (visual communications technology—½-1 unit) shall include the essential elements common to all industrial arts and the following essential elements and concepts and skills related to general drafting. The student shall be provided opportunities to:

(1) use American National Standards Institute symbols and conventions;
(2) demonstrate freehand sketching techniques;
(3) apply accepted lettering practices and styles;
(4) understand the relationship between points, lines, and planes through multiview drawing principles;
(5) describe objects adequately through the principles of shape and size description;
(6) describe objectives through various pictorial development techniques;
(7) apply drawing techniques suitable for reproduction;
(8) apply the concepts of residential building design and technical drafting;
(9) understand the use of the computer in designing and making working drawings; and
(10) use drawing reproduction and equipment.

(c) Engineering graphics (visual communications technology—½-1 unit) shall include the essential elements common to all industrial arts and the following essential elements and concepts and skills related to engineering graphics. The student shall be provided opportunities to:

(1) apply sketching techniques to develop drawing format and graphic problem solving;
(2) demonstrate orthographic projection techniques using advanced applications;
(3) select appropriate drafting conventions to describe object shape;
(4) apply descriptive geometry principles in developing revolution, auxiliary and successive auxiliary drawings;
(5) produce working drawings of single and multi-part mechanical devices,
(6) demonstrate the drawing of isometric, obliques, and perspective drawing;
(7) use standard parts charts and tables;
(8) apply the principles of advanced size description relating to tolerance and precision dimensioning;
(9) understand the principles of threads and fasteners and their symbolic application;
(10) understand the use of the computer for designing, plotting, and engineering manufactured products; and
(11) use drawing reproduction equipment.

(d) Technical drafting/advanced technical drafting (visual communications technology—½-1 unit) shall include the essential elements common to all industrial arts and the following essential elements:

(1) Concepts and skills related to technical drafting. The student shall be provided opportunities to:

(A) use American National Standards Institute symbols and conventions;
(B) understand the use of appropriate techniques and symbols common to selected technical drawing fields such as machine, structural welding, electrical and electronic, piping, topographical, computer-aided drafting, drafting for numerical control, technical illustration, gears and cams, developments, and jigs and fixtures;

(C) use selected charts and tables for making drawings;
(D) apply sketching techniques to develop drawing format and graphic problem solving;
(E) describe layout and assembly of systems function using appropriate pictorial drawings; and
(F) use drawing reproduction equipment.

(2) Concepts and skills relating to several areas of technical drafting and advanced technical drafting. The student shall be provided opportunities to:

(A) develop production drawings in up to four of the following areas:
(i) machine tools and parts;
(ii) structural steel;
(iii) welding;
(iv) electrical and electronics;
(v) piping;
(vi) topographical;
(vii) computer-aided drafting;
(viii) drafting for numerical control;
(ix) gears and cams;
(x) developments; and
(xi) jigs and fixtures;

(B) apply sketching, projection, and rendering techniques to produce technical illustrations; and

(C) understand the use of the computer for designing, plotting, and engineering manufactured products.

(e) Architectural drafting/advanced architectural drafting (visual communications technology—½-1 unit) shall include the essential elements common to all industrial arts and the following essential elements and concepts and skills related to architectural drafting. The student shall be provided opportunities to:

(1) use symbols, lettering, and building standards as published by the American Institute of Architects.
(2) understand minimum standards established by local and state building codes;
(3) select building materials;
(4) identify types of building construction;
(5) investigate basic housing styles;
(6) apply energy conservation practices;
(7) incorporate building safety and security measures into design;
(8) differentiate between residential/commercial and light/heavy construction;
(9) understand the use of the computer in designing, making working drawings, writing specifications, developing cost estimates, and managing construction;
(10) use architectural symbols and procedures to draw floor plans, elevations, foundation plans, plot plans, wall sections and details;
(11) apply design and planning principles to develop floor plan arrangement;
(12) apply technical illustration techniques to produce presentation drawings;
(13) develop schedules and written specifications; and
(14) use drawing reproduction equipment.

(f) General photography/advanced photography (visual communications technology—½-1 unit) shall include the essential elements common to all industrial arts and the following essential elements and concepts and skills in photography. The student shall be provided opportunities to:

(1) define the nomenclature of camera systems;
(2) apply principles of optics and light control;
(3) use artificial lighting techniques;
(4) demonstrate chemical preparation procedures;

(5) understand the principles of video, computer-generated images, and other photographic media;
(6) apply composition techniques in pictures;
(7) understand computer-assisted camera techniques;
(8) produce black and white negatives and prints;
(9) produce color negatives and prints;
(10) produce color transparencies;
(11) evaluate photographic work; and
(12) display photographic work.

(g) General power systems/advanced power systems (energy technology—½-1 unit) shall include the essential elements common to all industrial arts and the following essential elements and concepts and skills related to power systems. The student shall be provided opportunities to:
(1) understand the history of power systems;
(2) understand the development of power systems with the social and industrial implications;
(3) investigate and apply principles of generation, conversion, transmission, and control and use of mechanical and fluid power;
(4) investigate the use of computers to monitor and control power systems;
(5) experiment with internal and external combustion engines;
(6) analyze and experiment with mechanical applications to distribute and utilize power;
(7) test pneumatic and hydraulic control systems;
(8) determine efficiency and output of power systems; and
(9) recognize environmental relationships of power systems.

(h) General electrical systems/advanced electrical systems (energy technology—½-1 unit) shall include the essential elements common to all industrial arts and the following essential elements and concepts and skills dealing with electrical systems. The student shall be provided opportunities to:
(1) apply the use of electricity and electronics laws and principles;
(2) investigate atomic theory, sources of electricity, current flow, magnetism, theory and use of meters, simple circuits, simple DC and AC motors, and residential wiring;
(3) demonstrate the use of vacuum tubes, power supplies, amplifiers, oscillators, transmitters, electromatic radiation, receivers, and semiconductors;
(4) apply electrical practices involved in storage system;
(5) investigate electromagnetic systems;
(6) understand electro-mechanical systems;
(7) understand microwave laser systems;
(8) investigate the utilization of generators and transformers;
(9) understand the use of computerized circuit controls and program controls;
(10) describe solid state electronics;
(11) survey the mini-component electronic systems;
(12) apply radio and television communications principles;
(13) understand single phase and three phase concepts; and
(14) investigate security and detector system provided by electronic industry.

(i) General woodworking/advanced woodworking (production technology—½-1 unit) shall include the essential elements common to all industrial arts and the following essential elements and concepts and skills related to woodworking. The student shall be provided opportunities to:
(1) apply the industrial processes of material testing, planning, designing, fabricating, finishing, repairing, and refinishing;
(2) select construction materials best suited to a given application;

(3) transform raw materials into finished products;
(4) apply mass production techniques;
(5) demonstrate knowledge and skills in the use of hardware, fasteners, jointery, and adhesives;
(6) understand techniques and processes used in automated production systems;
(7) identify synthetic materials and exotic materials used for furniture and cabinetmaking;
(8) investigate industrial tools, materials, and processes common to the construction, furniture, and cabinetmaking industries; and
(9) understand the use of the computer and robots in manufacturing wood products.

(j) General metalworking/advanced metalworking (production technology—½-1 unit) shall include the essential elements common to all industrial arts and the following essential elements and concepts and skills of metalworking. The student shall be provided opportunities to:
(1) develop basic skills in four or more of the following areas:
(A) bench and wrought metal;
(B) machining;
(C) welding;
(D) foundry;
(E) forging and metallurgy;
(F) sheetmetal; and
(G) metal spinning;
(2) investigate the industrial processes of metal coating;
(3) practice metalworking skills and techniques for fabricating, forming, shaping, fastening, bending, cutting, drilling, turning, and finishing;
(4) research powdered metal technology;
(5) understand the oxidation of metals;
(6) apply mass production techniques;
(7) understand the properties and characteristics of metals; and
(8) understand the use of the computer and robots in manufacturing metal products.

(k) General plastics/advanced plastics (production technology—½-1 unit) shall include the essential elements common to all industrial arts and the following essential elements and concepts and skills related to plastics. The student shall be provided opportunities to:
(1) apply basic principles to molding, forming, mold making, bonding, laminating, encapsulating, foams, coating, vinyl dispersion, decorating, and thermofusion;
(2) practice mold making using silicone, urethane, latex, and epoxy;
(3) fabricate with chemicals, hot air, and heat sealing techniques;
(4) laminate with pressurized systems;
(5) apply machining techniques;
(6) use and maintain tools unique to the plastics industry;
(7) apply mass production techniques; and
(8) understand the use of the computer and robots in manufacturing plastics products.

(l) Industrial arts education. In addition to the courses classified in subsections (a)-(k) of this section, schools may offer any of the following approved industrial arts education courses according to local need:
(1) general computer applications;
(2) general graphic arts;
(3) advanced graphic arts;
(4) general transportation systems;

(5) advanced transportation systems;
(6) general energy systems;
(7) alternate energy systems;
(8) general manufacturing processes;
(9) general construction processes; and
(10) individual problems.

§75.86. *Marketing and Distributive Education.*

(a) Marketing and distributive education shall include the following essential elements:

(1) Concepts and skills associated with human relations, communications, and personality development. The student shall be provided opportunities to:

(A) demonstrate an ability to speak and write clearly;
(B) maintain good health and proper appearance for effective job performance;
(C) understand oneself and others;
(D) exercise self-control;
(E) accept and use criticism;
(F) recognize basic human relationships as they relate to business success; and
(G) identify forms of business communication.

(2) Concepts and skills associated with the distribution process and systems. The student shall be provided opportunities to:

(A) identify channels of distribution;
(B) select appropriate channels for products and services;
(C) use appropriate terminology; and
(D) compute rates and charges.

(3) Concepts and skills associated with the free enterprise system and its benefits. The student shall be provided opportunities to:

(A) understand the functions of risk and profit;
(B) understand the elements and advantages of the free enterprise system;
(C) learn the roles of the consumer in marketing;
(D) exhibit the value of improved productivity; and
(E) identify types of business ownership.

(4) Concepts and skills associated with merchandising product and service. The student shall be provided opportunities to:

(A) inform customers about merchandise, location, and service;
(B) identify appropriate sources of information; and
(C) use information to answer customers' questions.

(5) Concepts and skills associated with management principles and practices. The student shall be provided opportunities to:

(A) identify the role and functions of management;
(B) investigate a company for job information;
(C) develop a career plan; and
(D) practice job-seeking skills.

(6) Concepts and skills associated with business policies, forms, and records. The student shall be provided opportunities to:

(A) interpret and carry out policies of business;
(B) identify why policies are important and how they are formulated;
(C) learn to abide by policies; and
(D) identify and complete required forms and records.

(7) Concepts and skills associated with business environment, law, and ethics. The student shall be provided opportunities to:

(A) identify the elements of a business environment;

(B) identify ethical practices and responsibilities;

(C) identify related laws and regulations; and

(D) understand how laws and ethical practices are applied to business situations.

(8) Concepts and skills associated with inventory control system. The student shall be provided opportunities to:

(A) demonstrate the card system inventory;

(B) understand the mechanical system of inventory;

(C) demonstrate the operation of an inventory locator system; and

(D) introduce and understand the advantages of a computerized inventory control system.

(9) Concepts and skills associated with marketing mathematics. The student shall be provided opportunities to:

(A) understand and apply mark-up, mark-down, and stock turn;

(B) demonstrate ability to compute balance statements, profit and loss calculations, payroll techniques, invoices, tax calculations, and credit and interest; and

(C) demonstrate proficiency in cashiering.

(10) Concepts and skills associated with computer literacy and applications. The student shall be provided opportunities to:

(A) develop computer literacy as applicable to marketing and distributive occupations; and

(B) develop an awareness of specific applications of computers in marketing and distribution.

(11) Concepts and skills necessary to the specific occupations being taught.

(b) Marketing and distributive education II shall include the following essential elements:

(1) Concepts and skills associated with the marketing function. The student shall be provided opportunities to:

(A) analyze the profit motive as it relates to supply and demand;

(B) understand recession and inflation;

(C) develop sales goals;

(D) recognize trends and developments of marketing functions; and

(E) analyze the activities of competitors.

(2) Concepts and skills associated with merchandising. The student shall be provided opportunities to:

(A) demonstrate how merchandising creates desire;

(B) name the seven merchandising functions; and

(C) explain the six "rights" of merchandising.

(3) Concepts and skills associated with buying. The student shall be provided opportunities to:

(A) evaluate qualifications of a buyer;

(B) evaluate records used in buying;

(C) use a buying plan calendar;

(D) find the open-to-buy figure;

(E) use the stock/sales ratio in buying;

(F) identify qualities a buyer considers; and

(G) explain the differences between buying plans.

(4) Concepts and skills associated with promotion. The student shall be provided opportunities to:

(A) use promotion as it relates to other marketing functions;

(B) recognize the promotional goals of different firms;

(C) identify types of promotions;

(D) use a promotional plan; and

(E) develop a promotional campaign.

(5) Concepts and skills associated with management principles and practices. The student shall be provided opportunities to:

(A) identify basic management skills;
(B) use the six-step method of planning;
(C) use the four-step method of solving management problems;
(D) recognize management styles and roles; and
(E) recognize factors in personnel management.

(6) Concepts and skills associated with careers in management and professional sales. The student shall be provided opportunities to:

(A) recognize the responsibilities of the three levels of management;
(B) identify five points common to successfully maintaining the daily functions of management;
(C) develop skills and attitudes needed by the sales professional; and
(D) understand and use computer marketing skills.

(7) Concepts and skills necessary to the specific occupations being taught.

(c) Advertising services (2-3 units) shall include the essential elements of marketing and distributive education and the concepts and skills associated with advertising. The student shall be provided opportunities to:

(1) understand that the ultimate goal of advertising is to sell goods and services;
(2) recognize that advertising plans and schedules should be based on factual information;
(3) select advertising media best suited to the product or merchandise being advertised;
(4) identify advertising objectives;
(5) demonstrate establishing overall campaign strategy;
(6) develop a theme or idea for an advertisement;
(7) analyze problems associated with advertising, copywriting, layout, and media;
(8) write correct, attention-getting advertising displays;
(9) understand that displays play a major role in moving goods;
(10) demonstrate the fundamentals of a good display;
(11) use special displays to move merchandise;
(12) employ seasonal or storewide themes in department displays; and
(13) use color, harmony, balance, and proportion in display construction.

(d) Apparel and accessories marketing (2-3 units) shall include the essential elements of marketing and distributive education and the concepts and skills associated with apparel and accessories marketing. The student shall be provided opportunities to:

(1) recognize the value of designer and brand names;
(2) understand historical trends in fashions;
(3) recognize current fashions and new trends;
(4) apply color, line, and design theory;
(5) determine where to buy;
(6) learn how to buy;
(7) analyze factors which influence specialized store pricing;
(8) learn textile standards and information labels;
(9) use trade terminology;
(10) prepare speciality store merchandise plans; and
(11) simulate ownership.

(e) Financial services marketing (2-3 units) shall include a program that includes the essential elements of marketing and distributive education and the concepts and skills associated with financial services marketing. The student shall be provided opportunities to:

(1) learn policies, procedures, and public relations associated with banks, credit unions, or savings and loan institutions;

(2) understand state, federal, and local laws and their implications to the financial industry;

(3) recognize that management, supervisors, and employees require a framework of policies and procedures within which to operate;

(4) understand the line of authority;

(5) practice discussing and collecting delinquent accounts;

(6) define the various types of credit;

(7) learn current trends in the use of credit;

(8) practice translating credit information to the customer; and

(9) introduce data processing as a management process.

(f) Floristry, farm, and garden supplies marketing (2-3 units) shall include the essential elements of marketing and distributive education and the concepts and skills associated with floristry, farm, and garden supplies marketing. The student shall be provided opportunities to:

(1) develop knowledge and skills for retail floristry merchandising and design;

(2) understand design and layout of business facility;

(3) develop knowledge of fixtures and equipment needed to merchandise a floristry, farm, and garden supplies business;

(4) recognize diseases and problems of plants and determine corrective action;

(5) determine product mix of plants, fertilizers, and insecticides and quantities of each to carry in stock;

(6) understand the proper plants for different light and temperature conditions;

(7) recognize the proper fertilizer for different soil conditions;

(8) understand how to merchandise and store bulk feed, seed, and fertilizer; and

(9) know how to apply fertilizers and pesticides well enough to relate this to customers.

(g) Food marketing (2-3 units) shall include the essential elements of marketing and distributive education and the concepts and skills associated with food marketing. The student shall be provided opportunities to:

(1) demonstrate mathematics related to food marketing;

(2) understand the operations and merchandising of grocery, produce, dairy, meat, frozen foods, and bakery departments;

(3) learn front end operations;

(4) understand the operation and merchandising of the non-food departments; and

(5) observe and exhibit appropriate health standards for the occupational field.

(h) Home and office products marketing (2-3 units) shall include the essential elements of marketing and distributive education and the concepts and skills associated with home and office products marketing. The student shall be provided opportunities to:

(1) understand the major categories of home and office furniture;

(2) recognize the difference between hardwoods and softwoods;

(3) understand the uses of solid, veneer, and laminants in furniture construction;

(4) demonstrate relating structural qualities in terms of benefits to the customer;

(5) know the most popular fabric weaves and wood finishes and how to relate them to customers;

(6) understand the filling and padding materials most commonly used in furniture;

(7) know the labeling and grading requirements that apply to furniture;

(8) recognize ways to coordinate furniture by color, style, finish, and customer need; and

(9) understand building and construction codes.

(i) Industrial marketing (2-3 units) shall include the essential elements of marketing and distributive education and the competencies associated with industrial marketing. The student shall be provided opportunities to:

(1) understand the different types of wholesalers;
(2) understand the differences between retail selling and direct selling;
(3) understand the operations and functions of a warehouse;
(4) utilize inventory control systems;
(5) develop telephone sales techniques;
(6) understand how to use charts and catalogs in sale presentations instead of actual products;
(7) use demographic data to identify target markets and territories;
(8) calculate product costs to different kinds of wholesalers; and
(9) understand the effect that direct and functional expenses have on prices.

(j) Vehicle and petroleum marketing (2-3 units) shall include the essential elements of marketing and distributive education and the competencies associated with vehicle and petroleum marketing. The student shall be provided opportunities to:

(1) understand the fire and safety requirements;
(2) demonstrate the use of parts catalogs to secure stock numbers;
(3) understand substitutions and modifications available to customers when requested or needed part is not available;
(4) maintain stockroom by parts number;
(5) understand rental agreements;
(6) determine the proper parts and services needed by customer;
(7) determine when to reorder merchandise;
(8) recognize target markets to be served;
(9) develop knowledge and skills for automotive accessory merchandising; and
(10) develop knowledge and skills required in service station retailing.

(k) Hardware selling (2-3 units) shall include the essential elements of marketing and distributive education and the concepts and skills associated with hardware selling. The student shall be provided opportunities to:

(1) recognize customer needs, wants, competitive conditions, current trends, buying habits, tastes, and current lifestyles;
(2) establish pricing policies;
(3) recognize factors such as customer demand, markup, competitor's price, leader pricing, distressed merchandise, and seasonal merchandise;
(4) maintain accurate inventory control; and
(5) determine best location for merchandise.

(l) Food service and management (2-3 units) shall include the essential elements of marketing and distributive education and the concepts and skills associated with food service and management. The student shall be provided opportunities to:

(1) understand the types of food service operations;
(2) use kitchen machines, hand tools, and basic items;
(3) prepare guidelines to promote the service;
(4) understand and apply appropriate safety and health regulations;
(5) learn appropriate company procedures; and
(6) develop an understanding of personnel management needs in the food service industry.

(m) Wholesale and warehousing (2-3 units) shall include the essential elements of marketing and distributive education and the concepts and skills associated with wholesale and warehousing. The student shall be provided opportunities to:

(1) understand the unique quality of wholesale sales techniques;
(2) understand the use of forms and records necessary in inventory;
(3) understand how to handle and record customer payments;
(4) use procedures for reporting and handling damaged merchandise;
(5) follow carrier and union regulations when loading freight; and
(6) understand merchandising techniques used in wholesaling and warehousing.

(n) Personal marketing (2-3 units) shall include the essential elements of marketing and distributive education and the concepts and skills associated with personal marketing. The student shall be provided opportunities to:

(1) determine target market;
(2) determine promotional objectives;
(3) maintain customer service records and contracts;
(4) recognize pertinent questions to help customers define and understand their needs, wants, and problems with respect to the service offered; and
(5) develop knowledge and skills for merchandising service-oriented businesses.

(o) Recreation and tourism (2-3 units) shall include the essential elements of marketing and distributive education and the concepts and skills associated with recreation and tourism. The student shall be provided opportunities to:

(1) recognize types of entertainment which are in keeping with themes or objectives of the recreational facility and customer;
(2) conduct sales promotion campaigns aimed at tour operators and travel agents;
(3) develop knowledge and skills in customer and community relations and promotions as they relate to recreation and tourism; and
(4) acquire knowledge and awareness of available community resources and activities relating to recreation and tourism.

(p) Introduction to marketing (1 unit) shall provide laboratory and classroom instruction that includes the following essential elements:

(1) Concepts and skills associated with basic marketing principles. The student shall be provided opportunities to:
(A) understand the role of marketing in American business;
(B) identify products and services of marketing; and
(C) define marketing as it impacts on consumers.

(2) Concepts and skills associated with basic marketing functions. The student shall be provided opportunities to:
(A) recognize the use of economic resources in marketing;
(B) understand how marketing provides our standard of living; and
(C) learn how marketing is organized by its many functions.

(3) Concepts and skills associated with personal traits necessary for successful employment in marketing occupations. The student shall be provided opportunities to:
(A) develop an awareness of oneself in relation to others;
(B) understand the importance of health and personal hygiene in marketing occupations;
(C) exercise good judgment in selection of clothing and styles acceptable in marketing; and
(D) maintain interpersonal relationships necessary in marketing.

(4) Concepts and skills associated with mathematics in marketing occupations. The student shall be provided opportunities to:

(A) develop skill in the computation and application of whole numbers used in marketing;

(B) develop skill in the computation and application of common and decimal fractions used in marketing;

(C) develop skill in the computation and application of percentages used in marketing;

(D) develop skills in the application of all computation in the solving of practical problems in marketing; and

(E) develop math skills in the application of electronic equipment and systems used in marketing.

(5) Concepts and skills associated with communications in marketing occupations. The student shall be provided opportunities to:

(A) recognize and use the forms of oral communication used in marketing;

(B) recognize and use the forms of written communication used in marketing; and

(C) recognize and use the forms of nonverbal communication used in marketing.

(6) Concepts associated with economics and benefits of free enterprise as they relate to marketing. The student shall be provided opportunities to:

(A) explore fundamental concepts of economic systems;

(B) identify the nature, characteristics, and benefits of American free enterprise; and

(C) recognize the role of marketing in the free enterprise system.

(7) Concepts of careers and occupations available in marketing. The student shall be provided opportunities to:

(A) explore careers related to selling occupations in marketing;

(B) explore marketing careers in industrial distribution;

(C) explore marketing careers in wholesale and retail institutions; and

(D) prepare for application and entry into marketing occupations.

(q) Marketing and distributive education. In addition to the courses described in subsections (a) - (p) of this section, schools may offer marketing and distributive education in any of the occupations listed in this subsection or in those justified by employment needs through a cooperative arrangement. The following may be offered:

(1) entrepreneurship;

(2) hotel-motel management;

(3) insurance marketing;

(4) real estate marketing; and

(5) transportation marketing.

§75.87 *Occupational Home Economics Education.*

(a) Occupational home economics education. Every school offering occupational home economics shall include the following essential elements:

(1) Concepts and skills related to successful employment in a home economics occupation. The student shall be provided opportunities to:

(A) evaluate personal characteristics and identify areas of improvement;

(B) develop a positive attitude;

(C) respect rules of conduct which contribute to the welfare of others;

(D) demonstrate the ability to get along with others, solving or avoiding interpersonal problems;

(E) develop a life management process which enhances productivity on the job;

(F) analyze and use effective methods to secure a job;

(G) understand and demonstrate safe and productive work habits;

(H) demonstrate ability to conform to working rules established by employer;
(I) develop the ability to be a team worker;
(J) manage earnings successfully; and
(K) understand the free enterprise system.

(2) Concepts and skills necessary for the specific occupation to be taught.

(b) Child care (2-3 units) shall include the essential occupational home economics elements and the concepts and skills related to child care and guidance management and services. The student shall be provided opportunities to:

(1) understand the procedures and policies of a child care center;
(2) guide children in their adjustment to the child care center;
(3) participate effectively with parents of children in the child care center;
(4) identify competencies needed to be an effective child care employee;
(5) understand the need to provide a well-heated, well-ventilated, and well-lighted environment for children;
(6) identify the components of an interesting, comfortable environment for children;
(7) create and maintain a safe and healthy environment for young children;
(8) plan and prepare nutritious snacks and meals for young children;
(9) demonstrate an awareness of important considerations concerning children's clothing;
(10) assist with the housekeeping and maintenance tasks at the child care center;
(11) guide the growth and development of young children;
(12) assist children in developing behavioral patterns which promote their development;
(13) direct young children in routine activities;
(14) learn to create a healthy environment for children during meal or snack time;
(15) assist with the preparation and supervision of nap or rest time;
(16) guide young children in dressing and undressing;
(17) assist with classroom management and program planning at the child care center;
(18) learn to use teaching methods and skills appropriate for working with young children at varied developmental levels;
(19) understand how to guide young children in play activities;
(20) guide young children in art activities;
(21) guide the music and rhythmic activities of young children;
(22) guide young children in social awareness activities;
(23) guide young children in pre-number and other mathematical activities;
(24) assist with the development of health and safety habits of young children;
(25) provide young children with science and nature activities;
(26) manage young children in field trips, parties, and special activities;
(27) provide care for infants and toddlers to two years of age;
(28) work effectively with children with special needs;
(29) assist with management procedures in the child care center; and
(30) assist with child care center communications.

(c) Clothing, apparel, and textiles (2-3 units) shall include the essential occupational home economics elements and the concepts and skills related to clothing, apparel, and textiles management, production, and services. The student shall be provided opportunities to:

(1) achieve quality in construction when using domestic and industrial sewing machines;
(2) attain quality in hand sewing through use of appropriate stitches and equipment;
(3) achieve quality in sewing with correct pressing procedure;
(4) achieve quality in custom sewing through use of appropriate, efficient construction techniques;

(5) exhibit refined work habits when sewing and pressing clothing items;
(6) establish and maintain good relationship with customers;
(7) design or alter a pattern to ensure custom fit of the garment;
(8) attain quality in construction by cutting and marking accurately and appropriately;
(9) extend life of garments through effective repairs;
(10) fit garments on customer to correct fitting problems while maintaining grain of fabric;
(11) employ appropriate techniques in making various alterations;
(12) achieve balance, proportion, emphasis, rhythm, and unity in garments through effective use of the elements of design;
(13) consider textile characteristics in garment design, construction, alteration, repair, and care;
(14) design garments suitable for the season, the fabric, and the customer;
(15) emphasize safety practices in all aspects of clothing and textiles;
(16) construct accurate production patterns from designer specifications;
(17) achieve product quality through safe, efficient, and controlled industrial sewing methods;
(18) function effectively and efficiently in fashion merchandising;
(19) create effective displays to enhance the merchandise and the store;
(20) model garments effectively; and
(21) function effectively and efficiently in routine business operations.

(d) Food production, management, and services (2-3 units) shall include the essential occupational home economics elements and the concepts and skills related to food production, management, and services. The student shall be provided opportunities to:
(1) utilize commercial food service equipment correctly and safely;
(2) utilize high sanitation standards in personal grooming and hygiene;
(3) comply with high standards of sanitation in all phases of food handling;
(4) manifest high safety standards in performance of preparation, service, and cleanup tasks in food service establishments;
(5) manage the receiving, storing, and issuing of foods and supplies;
(6) coordinate various phases of meal planning, preparation, and service to ensure customer satisfaction;
(7) achieve quality standards when preparing various dishes and products for food service using spices, herbs, and flavorings;
(8) achieve quality standards in preparing various appetizers and garnishes and in garnishing foods for service;
(9) attain quality standards in preparing various nonalcoholic beverages;
(10) prepare various types of hot and cold sandwiches for commercial food service, achieving quality products;
(11) attain quality standards and variety in preparing fruits and vegetables for meal service;
(12) produce quality salads and salad dressings;
(13) achieve quality standards in preparing various types of soups, sauces, and gravies;
(14) prepare various cereals and macaroni products for commercial food service, adhering to quality standards;
(15) attain quality standards in preparation of eggs and various egg dishes;
(16) attain quality products when preparing cheeses and various cheese products;
(17) achieve quality standards in preparing various types of meats, seafoods, and poultry;
(18) attain quality standards in preparation of various quick breads;
(19) attain quality standards in preparing various types of fruit desserts and fried desserts;
(20) achieve quality standards in preparing various types of desserts;
(21) produce quality cakes and cookies;
(22) achieve quality standards in preparing varous types of pies, pastries, and meringues;

(23) display skills in performance of opening and closing duties;
(24) display skills in performance of bussing duties;
(25) assume responsibility related to performance of food service tasks in various types of food service establishments;
(26) demonstrate skills in performance of related business transactions; and
(27) demonstrate skills in performance of various catering tasks.

(e) Home furnishings (2-3 units) shall include the essential occupational home economics elements and the concepts and skills related to home furnishings and equipment management, production, and services. The student shall be provided opportunities to:
(1) achieve quality in commercial construction tasks through efficient use of tools and equipment;
(2) construct quality draperies using appropriate techniques;
(3) construct various curtains, shades, and window headings using accepted techniques;
(4) construct miscellaneous decorative items using accepted techniques;
(5) achieve harmony and individuality in home furnishings through effective use of the principles and elements of design.
(6) achieve interest and unity in room settings through use of accessories;
(7) learn to recommend furniture designs and construction details to meet client's needs appropriately;
(8) plan the use of home lighting to enhance a room or area;
(9) learn to assist clients with selections of floor coverings;
(10) learn to assist clients with selection and application of wall and ceiling treatments;
(11) achieve desired results when assisting clients with selection and installation of window treatments;
(12) demontrate appropriate use of tableware, table linens, and centerpieces to meet the clients' needs;
(13) integrate information about household linens in order to direct clients in their selection;
(14) demonstrate ways to utilize kitchen equipment and utensils in homes and displays;
(15) determine effective and efficient room arrangements;
(16) create effective displays to enhance home furnishings merchandise;
(17) perform various general procedures and customer service procedures involved in the floral business;
(18) achieve harmony and individuality through effective design and display of flowers, plants, and floral sprays; and
(19) utilize appropriate care, safety, and repair techniques when working with home furnishings.

(f) Institutional and home management (2-3 units) shall include the essential occupational home economics elements and the concepts and skills related to institutional and home management and supporting services. The student shall be provided opportunities to:
(1) understand and demonstrate how to use safety precautions in handling equipment and supplies;
(2) describe procedure for entering and leaving guest rooms in hotel or motel;
(3) follow instructions from employer or supervisor concerning methods and sequences to be used when performing cleaning tasks;
(4) follow sanitary procedures in performing all cleaning tasks;
(5) learn to plan for efficient performance of all tasks necessary to put rooms in good order;
(6) recognize necessity for sanitation and disinfection in hospital cleaning tasks;
(7) describe procedures for cleaning occupied rooms, unoccupied rooms, discharge units, and isolation units;
(8) describe procedure for entering and leaving the private home;
(9) recognize differences in floors;
(10) describe the appropriate method for cleaning each type of floor;
(11) utilize proper supplies and methods for shampooing carpets;
(12) learn to plan work so that cleaning tasks are performed on a regular basis;

(13) recognize times when general cleaning tasks need to be performed;
(14) understand sanitary procedures for laundering machine-washable and hand-washable articles;
(15) analyze functions and appropriate uses for laundry supplies;
(16) describe procedures and precautions for operating laundry equipment;
(17) apply principles of work simplification to ironing and pressing;
(18) demonstrate procedures for folding, storing, and handling linens and clothing;
(19) explain the necessity of following linen room procedures;
(20) learn how to select and use appropriate tools and supplies for repairs and maintenance tasks; and
(21) use appropriate techniques for repair and maintenance tasks.

(g) The following essential elements shall be common to all occupational home economics coordinated vocational-academic education (CVAE) courses in grades nine-12 only.

(1) Concepts and skills related to managing resources. The student shall be provided opportunities to:
(A) identify resources available to the worker;
(B) determine the interrelationship of resources;
(C) understand the methods of managing time and money; and
(D) identify the interrelationship of employment and home life and the implications for satisfaction.

(2) Concepts and skills related to personal development. The student shall be provided opportunities to:
(A) identify the methods for communication;
(B) develop the ability to communicate effectively; and
(C) understand the methods for attaining and maintaining physical health.

(3) Concepts and skills related to career opportunities. The student shall be provided opportunities to:
(A) identify methods for appropriate grooming;
(B) identify job opportunities;
(C) determine procedures for career planning;
(D) determine the procedure for finding a job; and
(E) determine the methods for keeping a job.

(h) Coordinated vocational-academic education (CVAE)—institutional and home management (2-3 units) (CVAE) institutional and home management shall include the essential occupational home economics elements and the concepts and skill related to institutional and home management and supporting services. The student shall be provided opportunities to:

(1) understand and demonstrate how to use safety precautions in handling equipment and supplies;
(2) learn the procedure for entering and leaving guest rooms in a hotel or motel;
(3) follow instructions from employer or supervisor concerning methods and sequences to be used when performing cleaning tasks;
(4) follow sanitary procedures in performing all cleaning tasks;
(5) learn to plan for efficient performance of all tasks necessary to put rooms in good order;
(6) recognize necessity for sanitation and disinfection in hospital cleaning tasks;
(7) learn the procedures for cleaning occupied rooms, unoccupied rooms, discharge units, and isolation units;
(8) learn the procedure for entering and leaving the private home;
(9) recognize difference in floors;
(10) learn the appropriate method for cleaning each type of floor;
(11) utilize proper supplies and methods for shampooing carpets;
(12) learn to plan work so that cleaning tasks are performed on a regular basis;
(13) recognize times when general cleaning tasks need to be performed;
(14) understand sanitary procedures for laundering machine-washable and hand-washable articles;
(15) analyze functions and appropriate uses for laundry supplies;

(16) describe procedures and precautions for operating laundry equipment;
(17) apply principles of work simplification to ironing and pressing;
(18) demonstrate procedures for folding, storing, and handling linens and clothing;
(19) explain the necessity of following linen room procedures;
(20) learn how to select and use appropriate tools and supplies for repairs and maintenance tasks; and
(21) use appropriate techniques for repair and maintenance tasks.

(i) Coordinated vocational-academic education (CVAE)—food production, management, and services (2-3 units). CVAE food production, management, and services shall include the essential occupational home economics elements and the concepts and skill related to food production, management, and services. The student shall be provided opportunities to:

(1) utilize commercial food service equipment correctly and safely;
(2) utilize high sanitation standards in personal grooming and hygiene;
(3) comply with high standards of sanitation in all phases of food handling;
(4) manifest high safety standards in performance of preparation, service, and cleanup tasks in food service establishments;
(5) manage the receiving, storing, and issuing of foods and supplies;
(6) coordinate various phases of meal planning, preparation, and service to ensure customer satisfaction;
(7) achieve quality standards when preparing various dishes and products for food service using spices, herbs, and flavorings;
(8) achieve quality standards in preparing various nonalcoholic beverages;
(9) prepare various types of hot and cold sandwiches for commercial food service, achieving quality products;
(10) attain quality standards and variety in preparing fruits and vegetables for meal service;
(11) produce quality salads and salad dressings;
(12) achieve quality standards in preparing various types of soups, sauces, and gravies;
(13) prepare various cereals and macaroni products for commercial food service, adhering to quality standards;
(14) achieve quality standards in preparation of eggs and various egg dishes;
(15) attain quality products when preparing cheeses and various cheese products;
(16) achieve quality standards in preparing various types of meats, seafoods, and poultry;
(17) attain quality standards in preparation of various quick breads;
(18) achieve quality standards in preparing various types of fruit desserts and fried desserts;
(19) achieve quality standards in preparing various types of desserts;
(20) produce quality cakes and cookies;
(21) achieve quality standards in preparing various types of pies, pastries, and meringues;
(22) display skills in performance of opening and closing duties;
(23) display skills in performance of bussing duties;
(24) assume responsibilities related to performance of food service tasks in various types of food service;
(25) demonstrate skills in performance of related business transactions; and
(26) demonstrate skills in performance of various catering tasks.

(j) Coordinated vocational-academic education (CVAE)—clothing, apparel, and textiles (2-3 units). CVAE clothing, apparel, and textiles shall include the essential occupational home economics elements and the concepts and skills related to clothing, apparel, textiles management, production, and services. The student shall be provided opportunities to:

(1) achieve quality in construction when using domestic and industrial sewing machines;
(2) attain quality in hand sewing through use of appropriate stitches and equipment;

(3) achieve quality in sewing with correct pressing procedure;
(4) achieve quality in custom sewing through use of appropriate, efficient construction techniques;
(5) exhibit refined work habits when sewing and pressing clothing items;
(6) attain quality in construction by cutting and marking accurately and appropriately;
(7) extend life of garments through effective repairs;
(8) consider textile characteristics in garment design, construction, alteration, repair, and care;
(9) emphasize safety practices in all aspects of clothing and textiles;
(10) achieve product quality through safe, efficient, and controlled industrial sewing methods; and
(11) function effectively and efficiently in routine business operations.

(k) In addition to the occupations described in subsections (a) - (j) of this section, schools may offer home economics education in any of the occupations listed in this subsection or in other home economics subject matter areas justified by supply/demand data. Schools offering training in these occupations shall provide a program that includes the basic home economics education elements and also the concepts and skills associated with the specific occupation or cluster of occupations involved. The following may be offered:
(1) fashion design;
(2) hotel-motel services;
(3) companion to the elderly;
(4) home economics career investigation;
(5) CVAE child care;
(6) VEH production, management and services; and
(7) PELE production, management, and services.

§75.88 *Occupational Orientation.*

(a) Occupational investigation (½-1 unit) shall include the following essential elements:
(1) Concepts and skills necessary for self-appraisal. The student shall be provided opportunities to use standardized or informal test data to appraise such factors as personal interests, aptitudes, achievement level, academic potential, life styles, and social/emotional needs.
(2) Concepts and skills related to the occupational clusters. The student shall be provided opportunities to:
(A) identify and analyze the occupational clusters to achieve a broad understanding of the world of work including new and emerging occupations;
(B) concentrate individual study on clusters related to personal interests and aptitudes to develop skills in utilization of sources of occupational information;
(C) train in decision-making skills to establish a method for continuing occupational decision making throughout life;
(D) utilize job information to learn about duties, educational requirements, training, salary, and other pertinent job-related factors;
(E) develop employability skills;
(F) develop realistic perceptions of the world of work; and
(G) participate in visits to work sites.
(3) Concepts and skills associated with socioeconomic factors related to occupations. The student shall be provided opportunities to gain an understanding of the economic system to determine attitudes toward work, human interrelationships on the job, and changes in work and life style resulting from changing economic and technological conditions.
(4) Concepts and skills needed for educational planning. The student shall be provided opportunities to:
(A) acquire an awareness of available educational training and resources through visits to high school programs, both academic and vocational, area vocational schools and programs, and post-secondary schools

and programs, or by bringing representatives of these schools and programs into the classroom; and

(B) develop a tentative educational plan for high school.

(b) Occupational exploration (½-1 unit) shall include the following essential elements:

(1) Concepts and skills involved in the in-depth exploration of jobs in an occupational cluster. The student shall be provided opportunities to:

(A) identify and analyze one of the occupational clusters;

(B) conduct an in-depth study of occupations in the cluster of personal interest to the student;

(C) participate in laboratory-based instruction; and

(D) participate in visits to work sites.

(2) Concepts and skills relating to the discovery of abilities, interests, and aptitudes. The student shall be provided opportunities to participate in assessment inventories, hands-on activities, and shadowing experiences to assist in the verification of personal interests, aptitudes, and abilities.

(3) Concepts and skills needed for the establishment of occupational goals. The student shall be provided opportunities to:

(A) investigate the socioeconomic characteristics of a specific occupation to establish relevancy to personal goals; and

(B) review personal aptitudes, interests, and emotional and physical needs to determine occupational goals.

(4) Concepts and skills leading to the formulation of specific educational plans. The student shall be provided opportunities to participate in visits to high schools and post-secondary institutions to acquire an awareness of available educational and training resources.

§75.89 *Office Education.*

(a) Office education shall include the following essential elements:

(1) Concepts and skills related to all office occupations. The student shall be provided opportunities to:

(A) identify and practice ethical business procedures;

(B) develop an understanding concerning careers in office occupations and levels of competency;

(C) apply the basic concepts of human relations in all types of interpersonal relationships;

(D) identify components of personal development as they relate to career plans;

(E) prioritize and organize work efficiently;

(F) identify and use resources and references available;

(G) identify the different types of business forms and reports and procedures for processing them; and

(H) demonstrate basic knowledge and usage of business machines.

(2) Concepts and skills involved in financial responsibilities. The student shall be provided opportunities to:

(A) demonstrate the ability to add, subtract, multiply, and divide whole numbers, fractions, and numbers containing decimals;

(B) maintain a checking account, including making deposits, writing checks, reconciling bank statements, and filing cancelled checks; and

(C) apply the principles of record keeping.

(3) Concepts and skills necessary for effective communication. The student shall be provided opportunities to:

(A) identify and use correct techniques when using the telephone for business purposes;

(B) prepare effective written communication;

(C) identify and apply correct language usage skills in business; and

(D) become familiar with word processing and computer terminology.

(4) Concepts and skills related to safety and safe working conditions. The student shall be provided opportunities to identify, understand, and apply safe working practices and procedures to all office train-

ing situations.

(5) Specific occupations being taught

(b) Secretarial and general office (1, 2, or 3 units) shall include office education core elements and the following essential elements:

(1) Concepts and skills involved in keyboarding in secretarial and general office. The student shall be provided opportunities to:

(A) recognize proofreader's marks and use them in editing;

(B) select appropriate tools for correcting errors and use them correctly;

(C) demonstrate procedures necessary in preparing mailable letters, envelopes, and packages; and

(D) understand methods of transmitting information electronically.

(2) Concepts and skills necessary for records control and management in secretarial and general office. The student shall be provided opportunities to:

(A) identify correct usage in applying terminology and procedures for indexing, coding, and filing using the alphabetic, numeric, subject, and geographic systems;

(B) understand procedures for controlling manual and automated records; and

(C) understand and demonstrate the procedures of handling incoming and outgoing mail.

(3) Concepts and skills necessary for the operation of office machines in secretarial and general office. The student shall be provided opportunities to:

(A) employ the touch system for computation of simple and complex mathematical problems using the electronic calculator;

(B) understand and demonstrate skills needed in operating copy machines; and

(C) demonstrate the process required in operating data/word processing equipment.

(4) Concepts and skills involved in financial responsibilities. The student shall be provided opportunities to:

(A) maintain a checking account, including making deposits, writing checks, reconciling bank statements, and filing cancelled checks; and

(B) apply the principles of record keeping.

(c) Word processing (1, 2, or 3 units) shall include office education core elements, secretarial and general office elements, and the following essential elements:

(1) Concepts and skills related to word processing. The student shall be provided opportunities to:

(A) demonstrate proficiency in business English;

(B) identify and apply correct format for business correspondence and documents;

(C) demonstrate proficiency in spelling and proofreading;

(D) demonstrate proficiency in dictation and transcription;

(E) identify and understand terminology used in word processing;

(F) demonstrate proficiency in using word processing equipment;

(G) demonstrate, classify, and sequence procedures in word processing;

(H) understand computer terminology as it relates to word processing;

(I) update word processing and computer terminology; and

(J) identify new and current developments in equipment.

(d) Office duplicating practices (2-3 units) shall include office education core elements and the following essential elements:

(1) Concepts and skills related to general safety needs and regulations. The student shall be provided opportunities to recognize and demonstrate general safety in the laboratory.

(2) Concepts and skills related to office duplication. The student shall be provided opportunities to:

(A) understand and demonstrate image processing for duplicating;

(B) demonstrate the procedures and equipment used in completing layouts and masters for duplication; and

(C) demonstrate the procedures used in operating duplicators.

(3) Concepts and skills related to supplementary machines. The student shall be provided opportunities to understand and demonstrate the use of the machines used in bindery operations.

(4) Concepts and skills related to typewriting. The student shall be provided opportunities to demonstrate the ability to keyboard materials for duplication.

(5) Concepts and skills related to electronic calculator. The student shall be provided opportunities to demonstrate the ability to solve mathematical problems using the touch method.

(6) Concepts and skills related to filing. The student shall be provided opportunities to identify the correct procedures in alphabetic filing.

(e) Bookkeeper (2-3 units) shall include office education core elements and the concepts and skills in handling general bookkeeping duties. The student shall be provided opportunities to:

(1) enter and verify details of transactions in chronological order in journals;

(2) summarize details on separate ledgers and transfer data to general ledger using manual or automated procedures;

(3) balance books and compile statistics to prepare required financial reports;

(4) identify terms, characteristics, and procedures in maintaining a petty cash fund;

(5) maintain a checking account, including making deposits, writing checks, endorsing checks, reconciling bank statements, and filing cancelled checks;

(6) prepare a payroll including computing gross and net pay, withholding social security, and other payroll forms;

(7) prepare required tax reports; and

(8) maintain customer ledger cards and handle monthly billings.

(f) Stock inventory clerk (2-3 units) shall include office education core elements and the concepts and skills related to stock inventory clerk. The student shall be provided opportunities to:

(1) identify stock inventories and records systems;

(2) understand procedures in compiling, comparing, checking, and verifying orders;

(3) understand procedures for stock ordering and reordering;

(4) demonstrate procedures for completing purchase requisitions;

(5) understand procedures for materials inspection and recording shortages, errors, or damages; and

(6) understand procedures in handling credits, returns, and back orders.

(g) Office education. In addition to the courses described in subsections (a) - (f) of this section, schools may offer office education in any of the occupations listed in this section or in those justified by employment needs. The following may be offered:

(1) medical secretary;

(2) legal secretary;

(3) insurance clerk;

(4) banking and related financial employee; and

(5) business data entry.

§75.90 *Technical Education.*

(a) Data processing (1, 2, or 3 units) shall include the following essential elements:

(1) Concepts and skills related to general data processing. The student shall be provided opportunities to:

(A) demonstrate comprehension of data processing terms;
(B) understand aspects of input and output; and
(C) understand the major components of data processing systems.

(2) Concepts and skills related to data entry. The student shall be provided opportunities to understand and demonstrate the use of data entry equipment.

(3) Concepts and skills related to programming and languages. The student shall be provided opportunities to:

(A) apply the concepts of logic to programming problems;
(B) translate the applied solution into a common programming language; and
(C) demonstrate the ability to debug and audit a solution.

(4) Concepts and skills related to data representation and storage. The student shall be provided opportunities to:

(A) demonstrate knowledge of computer numbering systems, data codes, and basic concepts of data storage; and
(B) establish random and sequential file structures.

(5) Concepts and skills related to computer operations. The student shall be provided opportunities to:

(A) demonstrate the use of computer equipment;
(B) demonstrate the use of job control language; and
(C) schedule and process requests to minimize the operational steps and run time.

(b) Computer programmer I (1 unit) shall be a laboratory-oriented course which includes the following essential elements:

(1) Concepts and skills related to general data processing. The student shall be provided opportunities to:

(A) demonstrate comprehension of data processing terms;
(B) understand the major components of data processing systems;
(C) understand aspects of input and output; and
(D) demonstrate knowledge of computer numbering systems and addressing techniques.

(2) Concepts and skills related to hardware component utilization. The student shall be provided opportunities to:

(A) become familiar with terminal keyboard;
(B) categorize hardware according to size, application, and configuration;
(C) practice turn on, sign on, and uploading procedures; and
(D) explore future hardware developments.

(3) Concepts and skills associated with programming and languages. The student shall be provided opportunities to:

(A) understand what a computer program is;
(B) distinguish between batch and online systems;
(C) acquire understanding of computer language constructs;
(D) translate problems into logical steps using graphic techniques;
(E) apply graphic solutions to a common programming language;
(F) demonstrate the ability to debug and audit a solution;
(G) become acquainted with job control language; and
(H) demonstrate the ability to predict output of a given program.

(4) Concepts and skills associated with data storage. The student shall be provided opportunities to:

(A) differentiate between various types of permanent data storage devices;
(B) understand methods of storage within devices;
(C) create a program to retrieve data from an existing file; and
(D) maintain a data file.

(c) Computer programmer II (2-3 units) shall be a laboratory-oriented course which includes the following essential elements:

(1) Concepts and skills related to application system development. The student shall be provided opportunities to:

(A) demonstrate comprehension of the system development process;

(B) analyze a problem;

(C) design a solution;

(D) program and test the solution; and

(E) develop an understanding of the implementation process.

(2) Concepts and skills related to language application. The student shall be provided opportunities to:

(A) establish random and sequential files;

(B) develop an understanding of procedure, subroutine, and function;

(C) translate graphic solutions into major structural elements of a program;

(D) translate graphic solutions into language statements for the input, editing, processing, and output procedures; and

(E) develop facility in use of job control language.

(3) Concepts and skills related to testing. The student shall be provided opportunities to:

(A) develop test data and testing techniques;

(B) run tests on programs and on the system; and

(C) demonstrate the ability to debug and audit programs and the system.

(4) Concepts and skills associated with implementation and maintenance of the system. The student shall be provided opportunities to:

(A) write documentation for maintaining the system;

(B) develop an understanding of preparing user documentation;

(C) gain an awareness of the implementation of a system into production status;

(D) develop understanding of the programmer responsibilities involved in system maintenance; and

(E) understand various input and output media (mark sense sheets, microfiche, etc.) and their appropriate use.

(d) Computer programmer III (2-3 units) shall be a cooperative or internship training program that includes the following essential elements:

(1) Concepts and skills related to advanced programming techniques. The student shall be provided opportunities to:

(A) develop skills in writing structured code;

(B) understand the concepts of modular programming;

(C) develop data entry screens and menus for online systems;

(D) gain knowledge of advanced file access methods; and

(E) develop a small application using a data base management system.

(2) Concepts and skills associated with program development tools. The student shall be provided opportunities to:

(A) become familiar with the functions of an operating system;

(B) develop facility in the use of other programming development tools and utilities; and

(C) investigate tools, information, and other services provided by the systems programmer function.

(3) Concepts and skills related to other functions of the data processing and user organizations. The student shall be provided opportunities to:

(A) become familiar with other support functions of the data processing organization;

(B) understand how the user organization collects data input and uses system output; and

(C) gain knowledge of project management techniques related to system development.

(c) Industrial electronics (2-3 units) shall include the essential trade and industrial education elements described in subsection (a) of §75.91 of this title (relating to Trade and Industrial Education) and the concepts and skills associated with industrial electronics. The student shall be provided opportunities to:

(1) understand the science of electronics;

(2) understand the source of electricity;

(3) apply the principles of mathematics and physics to electronics;

(4) read schematic diagrams;

(5) understand the application and use of conductors, semiconductors, and insulators;

(6) understand voltage, current, resistance, scientific notation, metric prefixes, and Ohm's law;

(7) analyze various types of circuits;

(8) understand voltage dividers and power;

(9) understand the theory and application of alternating currents;

(10) understand electronic theory and application as it applies to generators, electric motors, power supplies, electron amplifiers, electronic oscillators, radio transmitters, radio receivers, and television;

(11) understand electronic theory and application as it relates to integrated circuits;

(12) understand electronic theory and its application to computers and micro-computers; and

(13) analyze malfunctions in electronic circuitry.

§75.91 *Trade and Industrial Education.*

(a) Trade and industrial education shall include the following essential elements:

(1) Concepts and skills associated with safe working practices. The student shall be provided opportunities to:

(A) identify safe working practices;

(B) understand safe working practices;

(C) demonstrate skills in working safely; and

(D) apply safe working practices to all job-training situations.

(2) Care and use of hand tools and equipment. The student shall be provided opportunities to develop proper techniques for the use, maintenance, and storage of tools and equipment related to vocational industrial education.

(3) Concepts and skills associated with the specific occupation being taught.

(b) Air conditioning and refrigeration (2-3 units) shall include the essential trade and industrial education elements and the concepts and skills associated with air conditioning and refrigeration. The student shall be provided opportunities to:

(1) understand the fundamentals of refrigeration and basic refrigeration systems;

(2) service and repair compressors and compression systems;

(3) understand the fundamentals and applications of refrigerants;

(4) service and repair refrigerant controls;

(5) understand the basic fundamentals of electrical circuits and controls;

(6) understand domestic and commercial refrigeration systems applications including heat loads and piping;

(7) install, service, and repair domestic and commercial refrigeration systems;

(8) understand the fundamentals of air conditioning and basic air conditioning systems;

(9) install, service, and repair heating and humidifying systems, cooling and dehumidifying systems, distributing and cleaning systems, and complete air conditioning systems;

(10) perform maintenance and repair operations on air conditioning controls, circuits, and instruments; and

(11) perform maintenance and repair operations on automobile air conditioning systems.

(c) Auto body repair (2-3 units) shall include the essential trade and industrial education elements and the concepts and skills associated with auto body repair. The student shall be provided opportunities to:

(1) understand automobile body construction;

(2) develop proper techniques for the application of oxyfuel welding, cutting, brazing, soldering, and electric welding processes;

(3) understand the basic operations in collision repair;

(4) repair auto body sheet metal;

(5) straighten and align frames and bodies;

(6) repair damaged sheet metal panels using various body fillers;

(7) repair damage to fiberglass and plastic bodies and parts;

(8) adjust body panels;

(9) repair and adjust doors, tailgates, liftgates, and sun roofs;

(10) repair auto body trim and glass;

(11) repair automobile seats, seat belts, and interior trim;

(12) repair and replace vinyl roofs;

(13) identify and understand the proper application of automotive paint and paint products;

(14) prepare surfaces for painting;

(15) mix, match, apply, and finish automotive paint;

(16) analyze automotive paint problems; and

(17) estimate costs of auto body repairs.

(d) Auto mechanics (2-3 units) shall include the essential trade and industrial education elements and the concepts and skills associated with automobile mechanics. The student shall be provided opportunities to:

(1) understand the functions of the major automobile components;

(2) analyze malfunctions in automobile components;

(3) read and interpret appropriate repair manuals;

(4) estimate parts and labor costs on repair orders;

(5) understand the basic fundamentals of the automobile engine;

(6) remove, repair, and replace automobile engine components;

(7) understand the fundamentals of automobile engine systems;

(8) service and repair carbureted fuel systems, engine lubricating systems, and engine cooling systems;

(9) understand the fundamentals of gasoline engine fuel-injection systems and diesel engine fuel-injection systems;

(10) understand the fundamentals of automotive electrical and electronic equipment and systems;

(11) service and repair automotive electrical and electronic units and systems;

(12) service and repair automotive emission control systems;

(13) understand the fundamentals of automotive power trains;

(14) service and repair automotive power train components;

(15) understand the fundamentals of the automobile chassis;

(16) service and repair automotive chassis components; and

(17) service and repair automotive heating and air conditioning systems.

(e) Building trades (2-3 units) shall include the essential trade and industrial education elements and the following essential elements:

(1) Concepts and skills associated with carpentry. The student shall be provided opportunities to:

(A) understand the basic fundamentals of carpentry;

(B) read blueprints and work drawings;

(C) apply basic mathematics to carpentry measurement processes;

(D) identify and estimate costs of various building materials;

(E) utilize appropriate framing techniques including walls, floors, and ceilings;

(F) demonstrate proper techniques in roof construction;

(G) understand and demonstrate proper techniques in rafter measuring, cutting, assembling, and installing;

(H) install cornice trim and gutters;

(I) install roof flashing and covering;

(J) understand and demonstrate proper techniques in door and window installation;

(K) identify and install various exterior and interior wall covering and trim; and

(L) understand and demonstrate proper techniques in stair construction.

(2) Concepts and skills associated with bricklaying. The student shall be provided opportunities to:

(A) identify and understand the use of brick and masonry products;

(B) construct simple brick walls; and

(C) understand construction processes utilized in the construction of footings, piers, pilasters, chimneys, fireplaces, and arches.

(3) Concepts and skills associated with electrical trades. The student shall be provided opportunities to:

(A) understand the basic fundamentals of residential electrical construction;

(B) read schematic diagrams; and

(C) understand the installation of electrical controls, wiring, and fixtures.

(4) Concepts and skills associated with plumbing. The student shall be provided opportunities to:

(A) understand the basic fundamentals of residential plumbing operations; and

(B) understand the process and sequence of installing external and internal plumbing in residential construction.

(f) Commercial art (2-3 units) shall include the essential trade and industrial education elements and the concepts and skills associated with commercial art. The student shall be provided opportunities to:

(1) understand, create, and design graphic material for use as ornamentation, illustration, advertising on manufactured materials, and packaging;

(2) receive assignments from customer or supervisor to create, draw, or modify to achieve desired effect;

(3) understand traditional, period, and contemporary design styles to obtain perspective;

(4) review marketing trends and preferences of target and related markets;

(5) perform related duties, such as fabricating silk screen, drawing full size patterns, or cutting stencils;

(6) make illustrations for advertising, display, and instructional manuals;

(7) comprehend advertising theory and preparation of copy, lettering, poster design, fashion illustration, silk screen, airbrush and touchup, inks and color dynamics, package and product design, drawing for half-tone reproduction, and other display devices and exhibits; and

(8) fabricate specific items, such as signs, packaging, wallpaper, ceramics, tile, glassware, monograms, crests, emblems, or embroidery.

(g) Cosmetology (3 units) shall include the essential trade and industrial education elements and the concepts and skills associated with cosmetology. The student shall be provided opportunities to:

(1) understand the fundamentals of cosmetology;

(2) understand and utilize required sterilization and sanitation processes and procedures;

(3) prepare patrons for various cosmetic services;

(4) shampoo and rinse hair;

(5) apply specialized reconditioning, medicated cream, and color rinses;

(6) analyze various scalp and hair conditions;

(7) apply various scalp and hair treatments in accordance with identified conditions;

(8) understand and practice the basic fundamentals of manicuring;

(9) shape and thin hair using thinning shears, scissors, and razor;
(10) understand and utilize various curls in the hairstyling process;
(11) practice proper comb-out, blow drying, and finishing techniques;
(12) recognize appropriate hairstyles to compliment various facial and neck types;
(13) understand and properly utilize the chemicals, procedures, and processes associated with permanent waving;
(14) utilize appropriate processes and procedures in chemical hair relaxing;
(15) apply basic massage manipulations to the scalp, face, and neck;
(16) understand and utilize proper procedures to bleach, dye, and color hair;
(17) apply accepted procedures for the removal of superfluous facial hair;
(18) understand and demonstrate proper procedures in applying facial make-up; and
(19) analyze facial types and determine appropriate facial treatment to compliment the type.

(h) Drafting (2-3 units) shall include the essential trade and industrial education elements and the concepts and skills associated with drafting. The student shall be provided opportunities to:
(1) develop skills in sketching, lettering, dimensioning, and line development;
(2) exercise manual skill in manipulation of drafting tools;
(3) develop ink drawing;
(4) apply appropriate industrial techniques to the development of multiview drawings, sectional views, and pictorial drawings;
(5) understand and demonstrate skills in the use of descriptive geometry relating to auxiliary views, revolutions, intersections, and developments;
(6) utilize knowledge of various machines, engineering practices, mathematics, building materials, and other physical sciences to complete drawing;
(7) develop proper techniques in technical drafting;
(8) apply appropriate techniques to the development of architectural drawings, electrical and electronic drawings, welding drawings, map drawings, and structural and technical illustrations;
(9) understand and apply the various processes of drawing reproduction;
(10) understand the fundamentals of computer graphics;
(11) utilize knowledge to draft detailed working drawings of machinery and mechanical devices;
(12) draft multiple-view assembly and sub-assembly drawings; and
(13) draw and correct topographical maps from appropriate source data.

(i) Electrical trades (2-3 units) shall include the essential trade and industrial education elements and the following essential elements:
(1) Concepts and skills associated with residential wiring. The student shall be provided opportunities to:
(A) develop a basic understanding of the theory of electricity;
(B) understand the processes of generating and distributing electrical power;
(C) identify and apply electrical codes regulating residential electrical construction;
(D) plan and install residential electrical service entrance and individual and general-purpose branch circuits;
(E) understand and properly install electrical anchoring systems, boxes, meters, controls, and circuit protective devices;
(F) understand and demonstrate proper techniques in the installation of various cables, switch boxes, and connectors;
(G) install internal and external lights, controls, and service;
(H) read blueprints and schematic diagrams;
(I) estimate labor and material costs; and

(J) troubleshoot residential electrical problems.

(2) Concepts and skills associated with industrial wiring. The student shall be provided opportunities to:

(A) understand and utilize electric metallic tubing, rigid and flexible conduit on commercial installations;

(B) service single phase, split phase, capacitor start, and repulsion type motors;

(C) install and repair three phase motors;

(D) install and repair electric motor controls; and

(E) troubleshoot single phase motors, three phase motors, and motor controls.

(j) Machine shop (2-3 units) shall include the essential trade and industrial education elements and the concepts and skills associated with machine shop. The student shall be provided opportunities to:

(1) understand the basic metal cutting processes including drilling, turning, boring, milling, shaping, and broaching;

(2) demonstrate proper precision measuring skills;

(3) read blueprints and work drawings;

(4) utilize basic mathematics in precision measuring operations;

(5) demonstrate proper drilling and reaming procedures on the drill press;

(6) understand and utilize various work mounting procedures and devices on the engine lathe;

(7) turn metal to specified tolerances on the engine lathe;

(8) demonstrate proper procedures to cut threads, turn tapers, drill, ream, polish, knurl, and bore on the engine lathe;

(9) mill flat surfaces, bevels, chamfers, grooves, keyseats, and gears utilizing proper milling machine procedures;

(10) understand the types of abrasives and their uses;

(11) utilize proper machines and procedures for surface and cylindrical grinding operations;

(12) recognize special machining processes and applications including electrical discharge machining, electrochemical machining, and numerically controlled machining;

(13) machine and fit precision pieces; and

(14) understand the processes of hardening, tempering, annealing, normalizing, and case hardening steel.

(k) Metal trades (2-3 units) shall include the essential trade and industrial education elements and the following essential elements:

(1) Concepts and skills associated with machine shop. The student shall be provided opportunities to:

(A) understand the basic metal cutting processes including drilling, turning, boring, milling, shaping, and broaching;

(B) demonstrate proper precision measuring skills;

(C) read blueprints and working drawings;

(D) utilize basic mathematics in precision measuring operations;

(E) demonstrate proper drilling and reaming procedures on the drill press;

(F) understand and utilize various work mounting procedures and devices on the engine lathe;

(G) demonstrate proper procedures to turn, cut threads, turn tapers, drill, ream, polish, knurl, and bore on the engine lathe;

(H) utilize proper procedures to mill flat surfaces, bevels, chamfers, grooves, keyseats, and gears;

(I) understand the types of abrasives and their uses;

(J) machine and fit precision pieces; and

(K) understand the various heat treating processes.

(2) Concepts and skills associated with welding. The student shall be provided opportunities to:

(A) understand the basic theory of oxyfuel welding and cutting including types and use of flames and types of fuels;

(B) utilize the oxyfuel cutting process to produce freehand, straight line, pierce, and beveled cuts;
(C) weld metal plate, with the oxyfuel process, in flat, vertical, horizontal, and overhead positions;
(D) braze various joints on mild steel and cast iron with the oxyfuel process;
(E) understand the basic theory of shielded metal arc welding;
(F) understand and identify common types of electrodes and their uses;
(G) utilize the shielded metal arc process to weld various points on metal plate in all appropriate positions;
(H) utilize the shielded metal arc process to weld various pipe joints in vertical and horizontal positions;
(I) inspect and test welds; and
(J) read welding symbols.

(l) Mill and cabinetmaking (2-3 units) shall include the essential trade and industrial education elements and the concepts and skills associated with mill and cabinetmaking. The student shall be provided opportunities to:
(1) understand the fundamentals of cabinetmaking including design and function;
(2) identify and understand the uses of woods, fasteners, hardware, glass, and mirrors;
(3) read blueprints and work drawings;
(4) plan material needs and estimate costs;
(5) apply principles of mathematics to measurements;
(6) understand and demonstrate proper procedures in sawing, planing, shaping, turning, boring, mortising, and sanding various types of woods;
(7) identify and construct common cabinetmaking joints;
(8) understand and demonstrate proper procedures in gluing, clamping, laminating, veneering, and inlaying;
(9) utilize proper procedures to construct and install cabinet doors, furniture doors, drawers, drawer guides, shelves, cabinet interiors, legs, posts, table tops, and cabinet tops;
(10) construct and install kitchen cabinets;
(11) understand and demonstrate proper procedures in finishing including staining, filling, distressing, glazing, and applying protective coatings; and
(12) identify and understand industrial production processes and procedures.

(m) Offset printing (2-3 units) shall include the essential trade and industrial education elements and the concepts and skills associated with offset printing. The student shall be provided opportunities to:
(1) understand the basic theory of offset printing;
(2) identify typeface designs and sizes;
(3) plan, lay out, and copyfit jobs;
(4) understand the use of hot and cold type composition for reproduction;
(5) compose type using mechanical, impact, and phototypesetting processes;
(6) understand and use proofreaders' marks;
(7) prepare line copy, halftone copy, and color copy for camera reproduction;
(8) understand and practice the basic fundamentals of camera reproduction;
(9) understand and properly utilize halftone photography;
(10) understand the color reproduction process;
(11) develop film utilizing proper darkroom procedures;
(12) understand and practice proper layout and stripping processes;
(13) prepare direct image, presensitized, wipe-on, and electrostatic plates utilizing appropriate platemaking procedures;
(14) understand paper characteristics and uses;
(15) understand the basic fundamentals of sheet-fed and web offset presses and duplicators;

(16) demonstrate proper set-up, operation, and maintenance procedures on offset presses;
(17) estimate job costs;
(18) schedule jobs to meet deadlines;
(19) troubleshoot offset presswork; and
(20) understand legal restrictions on reproduction.

(n) Piping trades (2-3 units) shall include the essential trades and industrial education elements and the concepts and skills associated with piping trades. The student shall be provided opportunities to:
(1) understand the fundamentals of the piping trades;
(2) understand the installation and maintenance of high and low pressure process piping;
(3) fabricate, assemble, install, and maintain piping and piping systems;
(4) read blueprints and work drawings;
(5) install, repair, and service steam and hot water systems, heating, cooling, sprinkling, and industrial processing systems;
(6) cut pipe using various procedures;
(7) thread pipe using threading machine;
(8) bend pipe by hand or with pipe-bending machine;
(9) assemble and install a variety of metal and nonmetallic pipe;
(10) joint piping by various accepted methods;
(11) understand the installation and maintenance of refrigeration and air conditioning systems including compressors, pumps, meters, pneumatic and hydraulic controls, and piping;
(12) demonstrate the proper utilization of welding, soldering, and brazing; and
(13) install and service air conditioning systems, heating systems, fuel burning equipment, and boiler room piping systems.

(o) Sheetmetal (2-3 units) shall include the essential trade and industrial education elements and the concepts and skills associated with sheetmetal. The student shall be provided opportunities to:
(1) understand the basic fundamentals of sheetmetal construction;
(2) utilize the principles of mathematics in measuring;
(3) draw sheetmetal layouts and patterns utilizing current accepted methods;
(4) understand types, sizes, and properties of sheetmetal material;
(5) identify and construct common sheetmetal seams;
(6) understand and demonstrate proper techniques in constructing ducts, ells, transitions, offsets, and connections;
(7) estimate material and labor costs;
(8) understand and practice the basic fundamentals of oxyfuel welding, brazing, soldering, and cutting;
(9) understand and practice the basic fundamentals of shielded metal arc welding;
(10) understand and properly utilize the gas tungsten arc welding process in sheetmetal construction; and
(11) apply the principles of sheetmetal construction to the fabrication and installation of ventilation and air conditioning ducts.

(p) Small engine repair (2-3 units) shall include the essential trade and industrial education elements and the concepts and skills associated with small engine repair. The student shall be provided opportunities to:
(1) understand the function of the small gasoline engine and its components;
(2) understand the reciprocating piston engine and rotary combustion engine;
(3) identify types of small gasoline engines;
(4) clean and inspect small engine cooling systems;
(5) service various types of carburetor air cleaners;

(6) repair and service fuel systems, crankcase breather (4 cycle engines);
(7) understand and repair various types of lubrication systems;
(8) refuel small engines, select the proper fuel and prepare the fuel mixtures;
(9) adjust and repair the carburetor;
(10) evaluate engine compression;
(11) service and check batteries, rope-wind starters, and wind-up starters;
(12) repair alternating current starter and generating systems;
(13) maintain and repair ignition systems, magnets, and solid state ignition systems;
(14) repair governors, valves, cylinders, and piston-and-rod assemblies;
(15) inspect, remove, repair, and install camshaft and crankshaft assemblies; and
(16) troubleshoot and repair engines.

(q) Vocational electronics (2-3 units) shall include the essential trade and industrial education elements and the concepts and skills associated with vocational electronics. The student shall be provided opportunities to:

(1) understand direct current electronics related to current flow and voltage development related to resistance;
(2) understand Ohm's law and power;
(3) understand magnetism as it relates to inductance;
(4) design and build direct current circuits using bread board and printed circuit;
(5) understand alternating currents as related to measurements, wave forms, capacity and inductive circuits, and transformer and tuned circuits as used in radio and television;
(6) identify generators, determining values of sinusoidal and nonsinusoidal waves;
(7) determine resistance in AC circuits;
(8) determine effects of resistors, capacitors, and inductors on alternating current;
(9) understand and apply the characteristics of series parallel resonant circuits as found in radio and television;
(10) investigate the frequency response of bend-pass, bend-stop, high-pass, and low-pass filters as related to radio and television;
(11) understand semiconductors' structure and operation;
(12) develop a practical method of testing semiconductor diodes and transistors using volt-Ohm meters;
(13) investigate zener diodes as they apply to voltage regulation;
(14) demonstrate the operation of transistors by observing and measuring electrical characteristics;
(15) investigate basic theory of frequency modulation (FM);
(16) apply frequency modulation as related to modulation percentage, side bend, radiated power, and modulator systems including direct FM, indirect FM, reactance tube modulator, and serrasoid modulator and stereophonic multiplexing;
(17) understand television systems and subsystems;
(18) understand digital electronic circuits; and
(19) understand microprocessor theory and logic.

(r) Welding (2-3 units) shall include the essential trade and industrial education elements and the concepts and skills associated with welding. The student shall be provided opportunities to:

(1) understand the basic theory of oxyfuel welding and cutting;
(2) utilize the oxyfuel cutting process to produce freehand, straight line, pierce, and beveled cuts;
(3) weld metal plate with the oxyfuel process in flat, vertical, horizontal, and overhead positions on common joints;
(4) weld pipe joints in horizontal and vertical fixed positions with the oxyfuel process;
(5) braze various joints on mild steel and cast iron with the oxyfuel process;

(6) understand the basic theory of shielded metal arc welding;

(7) utilize the shielded metal are process to weld edge, lap, butt, tee; outside corner, and grooved butt joints on metal plate in all appropriate positions;

(8) utilize the shielded metal arc process to weld various pipe joints in vertical and horizontal positions;

(9) practice basic plate welding procedures utilizing the gas tungsten arc and gas metal arc welding processes;

(10) inspect and test welds;

(11) read welding symbols;

(12) understand the applications of specialized welding and cutting processes; and

(13) understand and utilize metal heat treating processes.

(s) Coordinated vocational-academic education (CVAE)—building maintenance (2-3 units) shall provide a program that includes the essential trade and industrial education elements and also the following essential elements:

(1) Concepts and skills associated with carpentry. The student shall be provided opportunities to:

(A) understand the basic carpentry building repair procedures;

(B) apply basic mathematics to carpentry measurement processes; and

(C) demonstrate proper techniques in repairing floors, walls, ceilings, and roofs, interior and exterior materials.

(2) Concepts and skills associated with electrical trades. The student shall be provided opportunities to:

(A) understand the basic fundamentals of electrical repair and maintenance; and

(B) demonstrate the proper techniques in repairing and replacing electrical wiring and controls.

(3) Concepts and skills associated with painting. The student shall be provided opportunities to:

(A) understand the basic fundamentals of interior and exterior paint refinishing; and

(B) demonstrate the proper techniques in refinishing floors, walls, and ceilings, interior and exterior materials.

(4) Concepts and skills associated with plumbing. The student shall be provided opportunities to:

(A) understand the basic fundamentals of plumbing repair and maintenance; and

(B) demonstrate proper techniques in repairing and replacing plumbing fixtures and lines.

(5) Concepts and skills associated with building cleanliness and sanitization. The student shall be provided opportunities to:

(A) understand the basic fundamentals of building cleanliness and sanitization;

(B) identify basic cleansing and sanitizing compounds, solutions, and chemicals; and

(C) understand the basic techniques for the application of cleansing and sanitizing solutions.

(t) Coordinated vocational-academic education (CVAE)—general construction trades (2-3 units) shall provide a program that includes the essential trade and industrial education elements and also the following essential elements:

(1) Concepts and skills associated with carpentry. The student shall be provided opportunities to:

(A) understand the basic fundamentals of carpentry;

(B) read blueprints and working drawings;

(C) apply basic mathematics to carpentry measurement processes;

(D) utilize appropriate framing techniques;

(E) understand proper techniques in roof construction;

(F) install various interior and exterior wall coverings; and

(G) understand proper techniques of door and window installation.

(2) Concepts and skills associated with bricklaying. The student shall be provided opportunities to:

(A) identify and understand the use of basic brick and masonry products; and

(B) construct simple brick walls.

(3) Concepts and skills associated with electrical trades. The student shall be provided opportunities to:
(A) understand the basic fundamentals of residential wiring; and
(B) install basic residential electrical wiring fixtures and controls.
(4) Concepts and skills associated with plumbing. The student shall be provided opportunities to:
(A) understand the basic fundamentals of residential plumbing; and
(B) install basic residential plumbing fixtures.
(5) Concepts and skills associated with concrete masonry. The student shall be provided opportunities to:
(A) understand the basic fundamentals of concrete masonry;
(B) erect simple concrete forms;
(C) install concrete reinforcement; and
(D) pour and finish a simple concrete slab.
(6) Concepts and skills associated with painting. The student shall be provided opportunities to:
(A) understand the basic principles of dry wall, interior finishes, and exterior finishes; and
(B) apply exterior finish.

(u) Coordinated vocational-academic education (CVAE)—general mechanical repair (2-3 units) shall provide a program that includes the essential trade and industrial education elements and also the following essential elements:
(1) Concepts and skills associated with automobile mechanics. The student shall be provided opportunities to:
(A) understand the functions of the major automobile components;
(B) perform basic preventive maintenance functions on the automobile;
(C) demonstrate proper techniques in performing a tune-up on an automobile; and
(D) remove, repair, and replace automobile brake system components.
(2) Concepts and skills associated with small engine repair. The student shall be provided opportunities to:
(A) understand the functions of the small gasoline engine and its components;
(B) identify types of small gasoline engines;
(C) understand the proper fuel and fuel mixtures required for various types of small engines;
(D) service and repair small engine fuel systems, lubrication systems, and starting systems; and
(E) troubleshoot and repair small engines.
(3) Concepts and skills associated with welding. The student shall be provided opportunities to:
(A) understand the basic theory of oxyfuel welding, brazing, and cutting;
(B) utilize the oxyfuel cutting process to produce freehand cuts;
(C) weld and braze metal plate using the oxyfuel process;
(D) understand the basic theory of shielded metal arc welding; and
(E) utilize the shielded metal arc process to weld butt and tee joints on metal plate.

(v) Coordinated vocational-academic education (CVAE)—general metal trades (2-3 units) shall provide a program that includes the essential trade and industrial education elements and also the following essential elements:
(1) Concepts and skills associated with metal benchwork. The student shall be provided opportunities to:
(A) understand the basic metal benchwork processes;
(B) read basic blueprints and drawings; and
(C) demonstrate proper benchwork techniques including hand sawing, filing, cutting metal with cold chisels, cutting external threads with dies, and cutting internal threads with tops.
(2) Concepts and skills associated with machine shop. The student shall be provided opportunities to:
(A) understand the basic metal cutting processes including drilling, grinding, turning, and milling;

(B) demonstrate the proper use of the bench or pedestal grinder;
(C) drill and ream holes using the drill press; and
(D) demonstrate the proper use of basic measuring tools including rules, calipers, and micrometers.

(3) Concepts and skills associated with welding. The student shall be provided opportunities to:
(A) understand the basic theory of oxyfuel welding, brazing, and cutting;
(B) utilize the oxyfuel cutting process to produce freehand cuts;
(C) weld and braze metal plate using the oxyfuel process;
(D) understand the basic theory of shielded metal arc welding;
(E) utilize the shielded metal arc process to weld edge, lap, butt, tee, and grooved butt joints on metal plate in various positions; and
(F) utilize the shielded metal arc process to weld various pipe joints in vertical and horizontal positions.

(4) Concepts and skills associated with sheetmetal work. The student shall be provided opportunities to:
(A) understand the basic sheetmetal work processes;
(B) develop basic sheetmetal patterns;
(C) demonstrate proper sheetmetal layout techniques; and
(D) demonstrate proper techniques in hand bending and cutting sheetmetal.

(w) Trade and industrial education.

(1) In addition to the occupations described in subsections (b) (v) of this section, schools may offer trade and industrial education in any of the occupations listed in this section or in other industrial occupations justified by supply/demand data. The following may be offered:
(A) aircraft mechanics;
(B) cleaning and pressing;
(C) heavy equipment repair;
(D) industrial engine repair;
(E) industrial media technology;
(F) iron worker;
(G) leather trades;
(H) marine engine repair;
(I) painting and decorating;
(J) petrochemical laboratory technician;
(K) radio and television repair;
(L) television production;
(M) vocational plastics;
(N) commercial photography;
(O) diesel mechanics;
(P) major appliance repair;
(Q) upholstery;
(R) CVAE commercial display and decoration;
(S) CVAE general marine repair;
(T) VEH electronic assembly;
(U) VEH laundry service; and
(V) VEH service station attendant.

(2) Schools offering training in these occupations shall provide a program that includes the basic trade and industrial education elements and also the concepts and skills associated with the specific occupation or cluster of occupations involved.

§75.121 *Dance.*

(a) Dance I (½-1 unit). Dance I shall include the following essential elements:

(1) Vocabulary of dance movement and a knowledge of factors that influence movement. The student shall be provided opportunities to:

(A) acquire fundamental skills in any or all of the following dance techniques:

(i) ballet;

(ii) modern;

(iii) jazz;

(iv) tap;

(v) folk;

(vi) character; and

(vii) ethnic; and

(B) develop kinesthetic awareness.

(2) Creative expression through movement. The student shall be provided opportunities to:

(A) develop creative potential through improvisation; and

(B) explore basic concepts and movement problems through improvisation.

(3) Awareness of space, time, and energy as design factors in dance technique or composition. The student shall be provided opportunities to:

(A) explore space, time, and energy in dance technique and improvisational studies;

(B) develop awareness of tempo, meter, accent, and phrasing in movement; and

(C) introduce spatial concepts and floor patterns in dance technique and improvisational studies.

(4) Development of self-confidence through the use of the body as an expressive instrument. The student shall be provided opportunities to participate in dance technique, presenting self in movement.

(5) Appreciation of dance as an art form. The student shall be provided opportunities to:

(A) explore work of dance artists; and

(B) view dance performances on tape or film or in live performances.

(b) Dance II (½-1 unit). Dance II shall include the following essential elements:

(1) Vocabulary of dance movement and a knowledge of factors that influence movement. The student shall be provided opportunities to:

(A) acquire intermediate skills in any or all of the following dance techniques:

(i) ballet;

(ii) modern;

(iii) jazz;

(iv) tap;

(v) folk;

(vi) character; and

(vii) ethnic;

(B) increase kinesthetic awareness; and

(C) develop movement memory.

(2) Creative expression through movement. The student shall be provided opportunities to:

(A) conceptualize movement ideas through improvisation and composition; and

(B) compose movement motifs.

(3) Awareness of space, time, and energy as design factors in dance technique or composition. The student shall be provided opportunities to:

(A) explore Laban efforts or qualities of movement such as:

(i) swinging;
(ii) percussion;
(iii) suspension;
(iv) sustained;
(v) collapsing; and
(vi) vibratory;

(B) develop a sensitivity to tempo, meter, accent, and phrasing in dance technique and in compositional studies; and

(C) develop spatial concepts and floor patterns in dance technique and improvisational studies.

(4) Development of self-confidence through the use of the body as an expressive instrument. The student shall be provided opportunities to:

(A) increase ability to perform technical skills in dance; and

(B) present movement ideas in informal studio or class showings.

(5) Appreciation of dance as an art form. The student shall be provided opportunities to:

(A) identify styles of dance; and

(B) view dance performances on tape or film or in live performances.

(c) Dance III (½-1 unit). Dance III shall include the following essential elements:

(1) Vocabulary of dance movement and a knowledge of factors that influence movement. The student shall be provided opportunities to:

(A) acquire advanced skills in any or all of the following dance techniques:
(i) ballet;
(ii) modern;
(iii) jazz;
(iv) tap;
(v) folk;
(vi) character; and
(vii) ethnic; and

(B) utilize kinesthetic awareness and movement memory to enrich movement vocabulary.

(2) Creative expression through movement. The student shall be provided opportunities to:

(A) analyze movement ideas through improvisation and composition; and

(B) compose movement studies based on compositional ideas, musical, or dance forms.

(3) Awareness of space, time, and energy as design factors in dance technique or composition. The student shall be provided opportunities to:

(A) manipulate Laban efforts or qualities of movement in designing dance studies;

(B) respond to tempo, meter, accent, and phrasing;

(C) identify spatial concepts and utilize floor patterns;

(D) understand the shape of dance movement; and

(E) develop musicality in performing dance techniques and compositional studies.

(4) Development of self-confidence through the use of the body as an expressive instrument. The student shall be provided opportunities to:

(A) audition for performances;

(B) rehearse for performances; and

(C) perform in public performances.

(5) Appreciation of dance as an art form. The student shall be provided opportunities to:

(A) analyze dance styles and works of dance artists;

(B) appreciate dance as presented in concerts and theatre; and

(C) understand the relationship of the art forms.

(d) Dance IV (½-1 unit). Dance IV shall include the following essential elements:

(1) Vocabulary of dance movement and a knowledge of factors that influence movement. The student shall be provided opportunities to:

(A) acquire advanced skills in any or all of the following dance techniques:

(i) ballet;

(ii) modern;

(iii) jazz;

(iv) tap;

(v) folk;

(vi) character; and

(vii) ethnic; and

(B) increase efficiency of movement through kinesthetic awareness, muscle memory, and visual recall.

(2) Creative expression through movement. The student shall be provided opportunities to:

(A) choreograph a complete movement statement;

(B) present movement study in performance;

(C) evaluate movement ideas and forms through viewing dance compositions; and

(D) express concrete or abstract ideas in movement.

(3) Awareness of space, time, and energy as design factors in dance technique or composition. The student shall be provided opportunities to:

(A) analyze Laban efforts or qualities of movement in dance technique or choreographic studies;

(B) use rhythmical elements of tempo, meter, and accent in composition and choreographic studies;

(C) manipulate negative and positive space in compositional studies;

(D) manipulate floor patterns in dance technique and compositional studies;

(E) identify spatial concepts and utilize floor patterns, understanding the shape of dance movement;

(F) develop musicality in performing dance technique and compositional studies;

(G) understand musical terminology as it relates to dance; and

(H) understand the underlying principles of all art forms.

(4) Development of self-confidence through the use of the body as an expressive instrument. The student shall be provided opportunities to choreograph and perform in public performances.

(5) Appreciation of dance as an art form. The student shall be provided opportunities to:

(A) explore history of dance as it relates to other art forms;

(B) analyze and evaluate dance concerts; and

(C) read critiques by established critics.

§75.122 *Driver Education.*

Courses offered in driver education must meet the standards for an approved course in driver education in Chapter 77, Subchapter W of this title (relating to Driver Education).

SUBCHAPTER E. WELL-BALANCED CURRICULUM

§75.141 *Description of a Well-Balanced Elementary Curriculum.*

(a) Essential elements. Within the time allocations described in this section, the school district shall provide instruction in the essential elements described in Subchapter B of this Chapter (relating to Essential Elements—Kindergarten-Grade Six).

(b) For limited English proficiency (LEP) students in kindergarten-grade 6, primary language instruction in the language arts and mathematics, science, and social studies content areas shall be provided within the prescribed time allocations listed in subsection (c), (d), and (e) of this section, as required by existing law and board rule and commensurate with individual student needs.

(c) Kindergarten.

(1) No less than 40 percent of the instructional day shall be devoted to teaching English language arts.

(2) No less than 20 percent of the instructional day shall be devoted to teaching mathematics.

(3) The daily schedule shall include instruction in physical education.

(4) The weekly schedule shall include instruction in fine arts, health, science, and social studies.

(5) The essential elements in all subjects are the same for half-day and full-day kindergarten programs. Time restrictions in half-day programs will limit the depth of instruction.

(6) The school district shall develop and implement a written instructional plan detailing how the essential elements will be addressed in physical education, fine arts, health, science, and social studies.

(7) Instruction in other languages may be included in the language arts instruction described in paragraph (1) of this subsection.

(d) Grades one-three.

(1) No less than 120 minutes per day shall be devoted to teaching English language arts.

(2) No less than 60 minutes per day shall be devoted to teaching mathematics.

(3) Within each semester, the equivalent of at least 100 minutes per week shall be devoted to teaching science.

(4) Within each semester, the equivalent of at least 100 minutes per week shall be devoted to teaching social studies.

(5) The daily schedule shall include instruction in physical education.

(6) The weekly schedule shall include instruction in fine arts and health.

(7) The school district shall develop and implement a written instructional plan detailing how the essential elements will be addressed in physical education, fine arts, health, science, and social studies.

(8) Each school district is encouraged to offer other languages to the extent possible.

(e) Grades four-six.

(1) No less than 90 minutes per day shall be devoted to teaching English language arts.

(2) No less than 60 minutes per day shall be devoted to teaching mathematics.

(3) No less than 45 minutes per day for each subject shall be devoted to teaching science and social studies.

(4) The equivalent of 60 minutes per week shall be devoted to teaching health.

(5) The equivalent of 120 minutes per week shall be devoted to teaching physical education.

(6) The equivalent of 120 minutes per week shall be devoted to teaching fine arts.

(7) Each school district is encouraged to offer other languages to the extent possible.

(8) Upon approval of the commissioner of education, school districts with departmentalized grades four, five, and six may modify the time requirements in paragraphs (1) - (6) of this subsection. Such modification shall provide for instruction in the essential elements specified in Subchapter B of this Chapter (relating to Essential Elements—Kindergarten-Grade Six) for the grade levels affected. School districts which wish to deviate from the time requirements in this section may submit an alternate plan to the commissioner of education for approval. The plan must indicate how the district will ensure that the required essential elements will be taught.

(9) The school district shall develop and implement a written instructional plan detailing how the essential elements and time requirements will be addressed in health, physical education, and fine arts.

(f) Special instructional activities. Some instructional activities such as science field trips, visits to museums or historical sites, and resource speakers may necessitate occasional deviations from the elementary time requirements. However, in scheduling such activities the district shall use professional discretion to assure that the activities are kept to a minimum and have a specified instructional purpose.

§75.142 *Description of a Well-Balanced Secondary Curriculum.*

(a) Grade six at the middle school.

(1) School districts shall teach the prescribed essential elements in English language arts, reading, mathematics, science, social studies, physical education, fine arts, and health, in accordance with Subchapter B of this chapter (relating to Essential Elements—Kindergarten-Grade Six).

(2) A unit at grade six shall constitute a minimum of 45 minutes of academically engaged time per day for a subject during a 175-day school year. A one-half unit shall constitute one semester for a subject which meets the minimum time of 45 minutes per day. All school districts must schedule at least a six-period day.

(3) The units required for each school district to provide and each student to take are:

(A) English language arts (one unit shall be reading)—2 units;

(B) mathematics—1 unit;

(C) science—1 unit;

(D) social studies—1 unit;

(E) physical education—½ unit;

(F) fine arts (selected from art, theatre arts, or music for which band, choral music, or orchestra may be offered in lieu of music)—½ unit; and

(G) health (essential elements shall be taught).

(4) School districts that wish to implement organizational structures that deviate from the provisions of this subsection or of §75.141(e) of this title (relating to Description of a Well-Balanced Elementary Curriculum), including grade five at the middle school, shall submit a request for exception to the commissioner of education. The request shall describe the proposed organizational structure and delineate how the district intends to offer instruction in the essential elements and meet minimum time requirements.

(b) Secondary grades seven-eight.

(1) School districts shall teach the prescribed essential elements in English language arts, mathematics, science, social studies, physical education, computer literacy, reading improvement, and elective courses in accordance with Subchapter C of this chapter (relating to Essential Elements—Grades Seven-Eight).

(2) Students shall take a minimum of 12 units as prescribed in paragraph (4) of this subsection.

(3) A unit shall require a minimum of 45 minutes of academically engaged time per day per course during a 175-day school year. A one-half unit is defined as a one-semester course which meets the minimum time of 45 minutes per day.

(4) Each school district shall teach and each student shall take:

(A) English language arts (refer to paragraph (5) of this subsection)—2 units;
(B) mathematics—2 units;
(C) life science (refer to paragraph (6) of this subsection)—1 unit;
(D) earth science (refer to paragraph (6) of this subsection)—1 unit;
(E) physical education (refer to paragraph (7) of this subsection)—1 unit;
(F) Texas history/geography (grade seven)—1 unit;
(G) United States history/citizenship (grade eight)—1 unit;
(H) computer literacy (refer to paragraph (8) of this subsection)—0 or ½ unit;
(I) reading improvement (refer to paragraph (9) of this subsection)—0, 1, or 2 units; and
(J) electives from State Board of Education approved courses, Subchapter C of this chapter (relating to Essential Elements—Grades Seven-Eight)—sufficient to complete 12 units.

(5) Limited English proficient students shall receive English language arts instruction through an English as a second language (ESL) class.

(6) Science courses shall be laboratory oriented (i.e., a minimum of 40 percent of the instructional time shall be devoted to laboratory/field activities). The life science course shall include a three-week unit per semester of health education with the essential elements as specified in §75.44(a)(11) of this title (relating to Science).

(7) One unit of physical education must be taken during grade seven or eight. Competitive athletics scheduled during, before, or after school may subst e for the unit of physical education. Competitive athletics may substitute either year for physical educaton for no more than one period during the regular school day. Students shall not enroll in more than one athletic or physical education period during the regular school day.

(8) One-half unit of computer literacy shall be completed during grade seven or eight. Districts may develop and implement a written plan for teaching and assessing mastery of the essential elements of computer literacy to students in elementary grades. Students who can demonstrate mastery of the essential elements of computer literacy on an assessment instrument from a list approved by the commissioner of education may be exempted from taking the one-half unit course in grade seven or eight.

(9) Students in grade seven or grade eight who score either below the 40th percentile or one year or more below grade level (one year or more below grade equivalency) on a standardized achievement test shall be assigned to the course reading improvement or English as a second language (ESL) for one unit. The course shall be taken in place of an elective.

(A) Scores from the most recent standardized test shall be used to determine eligibility. Additional information (i.e., history of school progress, other tests' data, and teacher observations) should be considered for those students who score less than one year below grade level.

(B) School districts may use a standardized assessment instrument administered in the last semester of grade seven in lieu of a standardized achievement test as a basis for determining participation in reading improvement in grade eight.

(10) A student may take a locally developed elective, not to exceed one semester, during grade seven or eight or both.

(11) Districts which provide only a six-period day for grades seven and eight may request to modify the unit requirements provided the essential elements in the subjects listed in paragraph (4) of this subsection are taught. The commissioner of education may approve such plans that meet the intent of this section.

(12) School districts shall be encouraged to offer health education as one of the elective courses available for student choice.

(13) Districts which offer courses designated for grades nine-12 (refer to subchapter D of this chapter relating to Essential Elements—Grades Nine-12)| in grades seven and eight shall verify that students who take these courses have satisfactorily completed the prerequisite grade seven and grade eight essential elements. The academic achievement record shall reflect that students have satisfactorily completed the courses in grades seven or eight. However, students shall complete the required number of units specified

in §75.151 of this title (relating to High School Graduation Requirements) and §75.152 of this title (relating to Advanced High School Program). Districts which allow students to take these courses in grades seven and/or eight may not also count credit-by-examination in the courses toward high school state graduation requirements. Exceptions to this rule include:

(A) Students who complete level I or II of language in grades seven and eight may use the units earned to satisfy the other language requirements in grades nine-12; however, such students shall complete the total number of units required in grades nine-12 for graduation; and

(B) Students who complete courses above the level of Algebra I in grades seven or eight may use the units earned to satisfy the requirements in mathematics in grades nine-12.

(14) Districts which elect to offer coordinated vocational academic education (CVAE) and vocational education for the handicapped (VEH) in grades seven-eight may request the commissioner of education to approve the modification of the unit requirements for students participating in such programs and shall demonstrate the methods by which the appropriate vocational and academic essential elements are to be coordinated.

(c) Secondary grades nine-12.

(1) Each school district shall offer the courses listed in this subsection and shall maintain evidence that students have the opportunity to take these courses every year or at least every other year.

(A) English language arts—English I, II, III, IV, English IV (academic), Correlated Language Arts, I, II, III, IV;

(B) Mathematics—Fundamentals of Mathematics, Consumer Mathematics, Pre-Algebra, Algebra I, Algebra II, Geometry, and Pre-Calculus. (Trigonometry and either Elementary Analysis or Analytic Geometry may be offered in lieu of Pre-Calculus.);

(C) Science—Biology I, Chemistry I, Physics I, Physical Science, Introductory Biology. Science courses shall be laboratory oriented (i.e., a minimum of 40 percent of the instructional time is devoted to student laboratory/field activities exclusive of teacher demonstrations);

(D) Social studies—United States History, World History Studies, United States Government, World Geography Studies;

(E) Economics with Emphasis on the Free Enterprise System and its Benefits (may be taught in either social studies or business education);

(F) Physical Education I and II;

(G) Health Education;

(H) Fine arts—courses selected from two of the three fine arts areas (art, music, and theatre arts);

(I) Business education—Typewriting, Accounting or Recordkeeping, Personal Business Management;

(J) Vocational education—courses selected from two program areas taught on a campus in the school district with provisions for contracting for additional offerings with programs or institutions as may be practical pursuant to §77.272 of this title (relating to Occupational Education for Public School Students by Contract);

(K) Other languages—levels I and II of another language; and

(L) Computer science—one-unit course from Computer Mathematics I or II, Business Data Processing and Introduction to Computer Programming, Vocational Data Processing, Vocational Computer Programming, or Computer Science I or II.

(2) School districts shall provide each student the opportunity to participate in all courses listed in paragraph (1) of this subsection. Students shall be given the opportunity each year to select courses in which they intend to participate from a list that includes all courses in paragraph (1) of this subsection. For those courses where 10 or more students indicate that they will participate or the course is required for a student to graduate, the district shall teach the course. For those courses where fewer than 10 students indicate that they will participate, school districts shall employ options described in §75.162 of this title (relating to Options for Offering Courses) to provide the course and shall maintain evidence thereof. If

a district is not going to offer the required courses every year, but intends to offer particular courses only every other year, the district must give notice of such fact to all enrolled students.

(3) School districts may request exemptions from the commissioner of education from the requirements to provide other language instruction. The commissioner of education may grant such exemptions to districts which show evidence of unreasonable hardship.

(4) Districts shall teach the essential elements as prescribed in the courses found in Subchapter D of this chapter (relating to Essential Elements—Grades Nine-12).

SUBCHAPTER F. GRADUATION REQUIREMENTS

§75.151 *High School Graduation Requirements.*

(a) Graduates of each high school are awarded the same type of diploma. The academic achievement record (transcript), rather than the diploma, records individual accomplishments, achievements, and courses completed.

(b) All units for graduation shall be earned in grades nine-12.

(c) All students shall complete a minimum of 21 units of credit to receive a high school diploma. The required units shall include the following:

(1) English language arts—four units.

(A) English I, II, III, or Correlated Language Arts, I, II, III.

(B) The fourth unit of English may be satisfied by English IV, English IV (academic), Correlated Language Arts IV, Introduction to Speech Communication, Research/Technical Writing, Creative/Imaginative Writing, Practical Writing Skills, Literary Genres, Business Communication, Debate, Journalism, or concurrent enrollment in a college English course.

(2) Mathematics—three units (if Algebra I has been satisfactorily completed in grade seven or eight, the student shall complete three additional units of mathematics in grades nine-12).

(3) Science—two units to be selected from the State Board of Education approved science courses, grades 9-12, subchapter D of this chapter (relating to Essential Elements—Grades Nine-12).

(4) Social studies—two and one-half units.

(A) World History Studies or World Geography Studies—one unit.

(B) United States History—one unit.

(C) United States Government—one-half unit.

(5) Economics, with Emphasis on the Free Enterprise System and its Benefits—one-half unit.

(6) Physical education—one and one-half units.

(A) The school district board of trustees may allow students to substitute certain physical activities for the one and one-half required units of physical education. Such substitutions shall be based upon the physical activity involved in drill team, marching band, and cheerleading during the fall semester; Reserve Officer Training Corps (ROTC); athletics; dance I-IV; and two- or three-hour block vocational gainful employment units. To be eligible to substitute the listed physical activities, except athletics, for physical education, students shall achieve an acceptable score on the Texas Physical Fitness—Motor Ability Test provided by the Governor's Commission on Physical Fitness or the Alliance for Health, Physical Education, Recreation, and Dance Youth Fitness Test. The minimum score shall be established by the commissioner of education and shall require students to demonstrate a level of physical fitness appropriate to their age and grade.

(B) Students may earn no more than two units of credit in physical education toward state graduation requirements.

(C) Districts shall classify students for physical education on the basis of health into one of the following:

(i) Unrestricted—not limited in activities.

(ii) Restricted—excludes the more vigorous activities.

(I) Permanent. A member of the healing arts licensed to practice in the State of Texas shall provide written documentation to the school as to the nature of the impairment and the expectations for physical activity for the student.

(II) Temporary. Students may be restricted from physical activity of the physical education class. A member of the healing arts licensed to practice in the State of Texas shall provide written documen-

tation to the school as to the nature of the temporary impairment and the expected amount of time for recovery. During recovery time, the student shall continue to learn the concepts of the lessons but shall not actively participate in the skill demonstration.

(iii) Adapted and remedial—specific activities prescribed or prohibited for students so classified as directed by a member of the healing arts licensed to practice in the State of Texas.

(7) Health Education—one-half unit.

(8) Electives—seven units. All electives shall be selected from the list of State Board of Education approved courses, grades nine-12. See Subchapter D of this chapter (relating to Essential Elements—Grades Nine-12).

(d) A maximum of two of the four units of English required for graduation may be English as a second language (ESL). All credit earned in ESL which is not counted toward the graduation requirement in English may be counted as electives in meeting state graduation requirements.

(e) Provisions concerning graduation for special education students may be found in §89.235(h) of this title (relating to General Program Requirements).

(f) Districts which elect to offer coordinated vocational academic education (CVAE), vocational adjustment cooperative (VAC), and vocational education for the handicapped (VEH) in grades nine-12 may request the commissioner of education to approve modification of the unit requirements for high school graduation for students participating in CVAE, VAC, and VEH programs and shall demonstrate the methods by which the appropriate vocational and academic essential elements are to be coordinated.

(g) Out-of-state transfer students shall complete all requirements of this section to be eligible to satisfy state graduation requirements. Units required in this section not completed by such students prior to enrolling in a Texas school district may be satisfied through the provisions of §75.166 of this title (relating to Credit by Examination) or by completing the course pursuant to the provisions of §75.169 of this title (relating to Award of Credit, Grade Nine-12).

§75.152 *Advanced High School Program.*

Statutory Citation

Texas Education Code §21.257:

"(b) The State Board of Education by rule shall prescribe standards for determining what constitutes an advanced high school program under this section."

Rule

(a) Students who wish to complete an advanced high school program and to have such accomplishment recognized and distinguished on the academic achievement record (transcript) shall complete requirements in addition to those prescribed in §75.151 of this title (relating to High School Graduation Requirements). Programs shall be of two types:

(1) Advanced high school program—22 credits selected from the provisions of subsection (b)(1)-(11) of this section; and

(2) Advanced high school honors program—22 credits selected from the provisions of subsection (b)(1)-(11) of this section. (Five of these units must be designated by the board of trustees as honors courses and must be in accordance with subsection (c) of this section).

(b) The required units shall include:

(1) English language arts—four units. English I, II, III, and IV (academic). Journalism, Creative/Imaginative Writing, Debate, and Introduction to Speech Communication may substitute for English IV (academic).

(2) Mathematics—three units. Algebra I (if Algebra I has been satisfactorily completed in grade seven or eight, the student shall complete three additional units of mathematics in grades nine-12), Algebra II, Geometry, Pre-Calculus (Trigonometry and either Elementary Analysis or Analytic Geometry may be taken in lieu of Pre-Calculus), Computer Mathematics I and II, Probability and Statistics, Calculus, Number Theory, Linear Algebra, Linear Programming, History of Mathematics, and Survey of Mathematics.

(3) Science—three units selected from Physical Science, Biology I, Biology II, Chemistry I, Chemistry II, Physics I, Physics II, Geology, Meteorology, Astronomy, Marine Science, Environmental Science, Laboratory Management, or Physiology and Anatomy.

(4) Other languages—two units from the same language.

(5) Social studies—two and one-half units as follows:

(A) World History Studies or World Geography Studies—one unit;

(B) United States History—one unit; and

(C) United States Government—one-half unit.

(6) Economics, with Emphasis on the Free Enterprise System and its Benefits—one-half unit.

(7) Physical education—one and one-half units.

(A) The school district board of trustees may allow students to substitute certain physical activities for the one and one-half required units of physical education. Such substitutions shall be based upon the physical activity involved in drill team, marching band, and cheerleading during the fall semester; Reserve Officer Training Corps (ROTC); athletics; dance I-IV; and two- or three-hour block vocational gainful employment units. To be eligible to substitute the listed physical activities, except athletics, for physical education, students shall achieve an acceptable score on the Texas Physical Fitness—Motor Ability Test provided by the Governor's Commission on Physical Fitness or the Alliance for Health, Physical Education, Recreation, and Dance Youth Fitness Test. The minimum score shall be established by the commissioner of education and shall require students to demonstrate a level of physical fitness appropriate to their age and grade.

(B) Students may earn no more than two units of credit in physical education toward state graduation requirements.

(8) Health Education—one-half unit.

(9) Computer science—one unit selected from:

(A) Computer Mathematics I or II;

(B) Business Data Processing and Introduction to Computer Programming;

(C) Vocational Data Processing;

(D) Vocational Computer Programming;

(E) Business or Vocational Word Processing; and

(F) Computer Science I or II.

(10) Fine arts—one unit to be selected from the list of State Board of Education approved courses.
(11) Electives—three units. (All electives shall be selected from the list of State Board of Education approved courses, grades nine-12. See subchapter D of this Chapter (relating to Essential Elements—Grades Nine-12)).

(c) School district boards of trustees that wish to offer the advanced high school honors program shall adopt policies which provide for such special honors courses and programs. Such policies shall provide for modification of the courses of study in subsection (b) of this section by accelerating, providing greater depth, and expanding the courses and their essential elements described in this section and in Subchapter D of this chapter (relating to Essential Elements—Grades Nine-12) and shall be consistent with subsection (d) of this section. School districts shall ensure that students participating in honors courses or programs are instructed in all essential elements and demonstrate an acceptable degree of mastery of those elements.

(d) Honors courses shall be defined as those courses having specific criteria for entry of highly motivated students; a definite scope and sequence that reflects the nature of the subject; a differentiated curriculum that includes a wider range and greater depth of subject matter than that of the regular course; an emphasis on higher level and critical thinking skills; provision for creative, productive thinking; a stress on cognitive concepts and processes; instructional strategies that accommodate the learning styles of the students involved; and independent as well as guided research. School districts wishing to offer honors courses or programs in accordance with subsection (c) of this section shall submit descriptions of these courses or programs to the commissioner of education, who shall review and may approve the descriptions. The commissioner of education shall inform the State Board of Education of such actions. Those districts that wish to continue honors courses or programs currently in place shall submit descriptions by December 1, 1984, to be considered for approval effective September 1, 1985. Districts that wish to develop new honors courses or programs shall submit descriptions for consideration for approval at least six months prior to proposed implementation.

§75.153 *Academic Achievement Record (Transcript).*

Statutory Citation

Texas Education Code §21.257:

"Academic Achievement Record for Advanced Program

(a) Each school district shall report the academic achievement record of a student who has completed an advanced high school program on a transcript form adopted by the State Board of Education. The transcript form adopted by the State Board of Education must be designed to distinguish it from a transcript used for the academic achievement record of a student who has not completed an advanced high school program."

Rule

(a) All school districts shall use the academic achievement record (transcript) form adopted by the State Board of Education in subsection (d) of this section. Each district is responsible for reproducing the form in sufficient quantities. The form shall serve as the academic record for each student and shall be maintained permanently by the district. Each district shall ensure that copies of the record are made available for students transferring from one district to another. This information may be provided to the student

or to the district to which the student is transferring or both. To ensure appropriate placement of transfer students, districts shall respond promptly to all requests for student records from receiving school districts.

(b) The commissioner of education shall develop and distribute to all school districts and institutions of higher education in the state a common coding system for courses and instructions for recording information on the academic achievement record. All school districts shall use the system provided by the commissioner.

(c) Students who complete high school graduation requirements shall have attached to the academic achievement record one of the following seals:

(1) Students who complete the high school program shall have the following seal attached to their academic achievement record:

(2) Students who complete the advanced high school program shall have the following seal attached to their academic achievement record:

(3) Students who complete the advanced high school honors program shall have the following seal attached to their academic achievement record:

(d) The academic achievement record form shall be as follows:

ACADEMIC ACHIEVEMENT RECORD

Full Legal Name _____ (Last) _____ (First) _____ (Middle)

Student ID Number _____ **Ethnicity** _____

Social Security Number ___-___-___ **Sex** _____

Date of Birth _____ Place of Birth _____

Parent(s) _____ or _____ Guardian(s) Name _____

Current Address _____ (Street) _____ (City) _____ (State/Zip Code)

Most Recent Former Address _____ (Street) _____ (City) _____ (State/Zip Code)

Home Phone (___) ___-____ Business Phone (___) ___-____

Name of High School _____

Phone No. (___) ___-____ **Proposed Date of Graduation** _____

High School Address _____ (Street) _____ (City) _____ (State/Zip)

District Name _____

TEA County-District-Campus Number ___-___-___

Rank _____ No. in Class _____ Date of Ranking _____

Grade Point Average _____ Date Graduated _____

Last District/High School Attended _____

Address _____ (Street) _____ (City) _____ (State/Zip Code)

College Board Campus Code Number _____

Advanced High School Program _____

Advanced High School Honors Program _____

Date of Entry in 8th Grade _____

TABS Mastery, Exit Level

Mathematics	Reading	Writing
___/___	___/___	___/___
Mo./Yr.	Mo./Yr.	Mo./Yr.

Signature and Title of School Official

Generic Course Name	Grade 9 19__-__ Abbreviated Course Name	1st Sem. Grade	2nd Sem. Grade	Credit	Grade 10 19__-__ Abbreviated Course Name	1st Sem. Grade	2nd Sem. Grade	Credit	Grade 11 19__-__ Abbreviated Course Name	1st Sem. Grade	2nd Sem. Grade	Credit	Grade 12 19__-__ Abbreviated Course Name	1st Sem. Grade	2nd Sem. Grade	Credit	Extra 19__-__ Abbreviated Course Name	1st Sem. Grade	2nd Sem. Grade	Credit
English Language Arts																				
Mathematics																				
Science																				
Social Studies																				
Economics/Free Enterprise																				
Health																				
Physical Education																				
Other Languages																				
Fine Arts																				
Computer Science																				
Vocational Education																				
Electives																				
Business Education																				
Local Credit																				
Total Credits for Year																				

Absences

	1st Sem.	2nd Sem.	Total
Regular School Year			

Entered _____ Withdrew _____ Reason _____

Entered _____ Withdrew _____ Reason _____

Explanation of Grades (Example A = 93-100)

A = ____

B = ____

C = ____

D = ____

Definition of Grade Points (Example A = 4.0 points) A = ____ B = ____ C = ____ D = ____

Note: In the *Abbreviated Course Name* column, space is provided to the right of the dashed line for H = Honors Courses, S = Special Education courses taken as a result of an ARD decision, Other.

AAR-001

Accredited By:

Texas Education Agency ___ Yes ___ No

Southern Association of Secondary Schools ___ Yes ___ No

THE STATE OF TEXAS

FOR LOCAL USE

240

256

STANDARDIZED TEST/TABS RESULTS

Academic Achievement Record Sent:

Requesting Agency	Date Sent

Academic Achievement Record Sent:

Requesting Agency	Date Sent

Honors/Activities

257

Special Comments

SUBCHAPTER G. OTHER PROVISIONS

§75.161 *Schedule for Implementation.*

(a) The requirements in this chapter shall be implemented in accordance with the following schedule:

(1) Elementary, Kindergarten-Grade Six.

(A) All provisions of §75.141 of this title (relating to Description of a Well-Balanced Elementary Curriculum) and §75.142(a) of this title (relating to Description of a Well-Balanced Secondary Curriculum) concerning allocation of instructional time in grade six at the middle school shall be implemented fully beginning with the 1984-85 school year.

(B) All provisions of Subchapter B of this chapter (relating to Essential Elements, K-Grade Six) regarding essential elements to be taught shall commence to be implemented in the 1984-85 school year and shall be fully implemented beginning with the 1985-86 school year.

(2) Secondary, Grades Seven-12.

(A) All provisions of §75.142(b) and (c) of this title (relating to Description of a Well-Balanced Secondary Curriculum) and Subchapter F of this chapter (relating to Graduation Requirements) shall be implemented fully beginning with the 1985-86 school year. Students entering grade nine in the 1984-85 school year and thereafter shall be required to meet the provisions of Subchapter F of this chapter (relating to Graduation Requirements).

(B) All provisions of Subchapter C of this chapter (relating to essential elements, Grades Seven-Eight) and Subchapter D of this chapter (relating to Essential Elements, Grades Nine-12) shall be implemented fully beginning with the 1985-86 school year.

(3) Other sections. Provisions of other sections of this chapter shall be implemented during the 1984-85 school year unless otherwise specified.

(b) For each section of this chapter, a school district shall operate under one set of rules during the implementation period specified in subsection (a) of this section. Current rules in Chapter 97 of this title (relating to Planning and Accreditation) applicable to each section of this chapter shall remain in effect until a school district implements the provisions of that section. If a district chooses to implement sections of this chapter earlier than specified in subsection (a) of this section, the district shall be subject to the provisions of those sections.

(c) Each school district shall submit a plan for implementation of all requirements in this chapter to the Division of School Accreditation before August 31, 1984. This plan shall reflect the district's intent and commitment to orderly implementation of the provisions of this section, but a district may implement requirements earlier than the dates specified in subsection (a) of this section. The plan shall also include the methods the school district will utilize to communicate the major provisions of this chapter to parents, students, and the general public. The commissioner of education shall provide a format for district plans and shall provide for review of plans submitted to ensure that all school districts meet the provisions of this chapter.

§75.162 *Options for Offering Courses.*

(a) School districts shall use alternative delivery procedures to ensure that essential elements and courses are taught in accordance with the requirements of this chapter. All fees or other costs for students to participate in alternative delivery procedures shall be borne by the district. Districts are encouraged to utilize various strategies to meet such requirements including, but not limited to, the following:

(1) Cooperatives. Two or more districts may arrange for the cooperative use of personnel, facilities, or materials and equipment.

(2) Contracting. Districts may contract for the delivery of instruction with other school districts or other institutions approved by the Central Education Agency.

(3) Technology. Districts may choose from a variety of technological advancements, including, but not limited to, computer-assisted instruction, interactive television, and video- or audio-taped courses.

(4) Adjusted school week. One or more districts may deliver instruction within an adjusted school day or school week. A district wishing to implement the adjusted school day or school week concept shall submit a plan for implementation to the commissioner of education for approval.

(5) Other. Districts are encouraged to identify and utilize other procedures for providing instruction in courses where limited numbers of students will participate.

(b) Regional education service centers, in accordance with their responsibility to coordinate educational services and planning, shall provide assistance to school districts in developing and implementing such alternative delivery procedures.

§75.163 *Correspondence Courses.*

(a) A school district may allow resident students, students temporarily residing abroad, or out-of-school youths and adults to earn units of credit in grades nine-12 by taking correspondence courses from another educational institution. A school district board of trustees that wishes to provide for credit by correspondence shall adopt a policy which shall be consistent with this section and which includes:

(1) criteria for student eligibility;

(2) requirements and procedures for approval by designated school authorities before a student enrolls;

(3) provision for assignment of staff members to supervise correspondence work;

(4) provisions that resident students may earn a maximum of two of the total units required by the state for graduation through correspondence courses; and

(5) provisions that students temporarily residing abroad and out-of-school youths and adults must earn a minimum of 12 state-required units of credit in residence.

(b) Credit toward state graduation requirements may be granted under this section only under the following conditions:

(1) the institution offering the course shall be The University of Texas at Austin, Texas Tech University, or other public institutions of higher education approved by the commissioner of education;

(2) the correspondence course includes the essential elements specified in this chapter for such a course; and

(3) the specific course has been approved by the commissioner of education.

(c) The commissioner of education shall have the authority to approve correspondence courses offered for high school credit by The University of Texas at Austin, Texas Tech University, or other public institutions of higher education. The existing approval of correspondence courses offered by The University of Texas at Austin and Texas Tech University will terminate August 31, 1985. Those institutions wishing to offer correspondence courses after September 1, 1985, shall submit materials required by the commissioner of education in accordance with subsection (b) of this section.

§75.164 *Experimental Courses and Magnet Programs.*

(a) School districts may develop experimental courses designed to enable students to master knowledges, skills, and competencies not included in the essential elements in Subchapter D of this chapter (relating to Essential Elements—Grades Nine—12).

(1) All experimental courses which have been approved in previous years for state credit toward graduation will cease to be approved August 31, 1985.

(2) The commissioner of education may approve a limited number of such courses only when the applicant district demonstrates that the proposed course is academically rigorous and addresses documented student needs.

(3) Experimental courses for which a district wishes to award credit toward state graduation requirements must have prior approval of the commissioner of education. The district shall submit a request for approval which includes:

(A) description of the course and its elements or objectives;

(B) rationale and justification for the request in terms of student need;

(C) description of activities, major resources, and materials to be used;

(D) methods for evaluating student outcomes;

(E) qualifications of teacher; and

(F) school years for which approval is requested.

(4) Experimental courses may be approved by the commissioner of education under this section for a maximum of five school years. Districts that wish to continue offering a course may apply for reapproval. The commissioner shall require the district to show evidence that the course should be continued.

(b) School districts may operate magnet programs to serve student populations with specialized interests and aptitudes.

(1) Magnet schools or programs which do not meet all applicable requirements of this chapter must be approved by the commissioner of education. Districts seeking approval under this subsection shall apply in writing to the commissioner of education. The district's request must include the same information as that specified for requests for approval for experimental courses in subsection (a) of this section.

(2) Magnet programs which meet all of the applicable requirements of this chapter need not seek special approval.

§75.165 *Courses for Local Credit Only.*

(a) A school district may offer one or more courses for local credit only. Such courses may not be counted toward state graduation requirements but may be counted toward local unit credit in addition to the requirements of §75.151 of this title (relating to High School Graduation Requirements) and §75.152 of this title (relating to Advanced High School Program).

(b) Credit for courses offered for local credit only may be transferred from one school district to another with the consent of the receiving district.

§75.166 *Credit by Examination.*

(a) A school district board of trustees which chooses to grant credit by examination shall follow the criteria for the content and for procedures established by the commissioner of education. The board of trustees shall adopt a policy that allows students to earn credit by examination for one or more of the courses listed in Subchapter D of this chapter (relating to Essential Elements—Grades Nine-12). The district's policy shall include, but need not be limited to, the following:

(1) eligibility requirements for students seeking credit by examination;

(2) courses for which credit may be earned by examination;

(3) procedures for examinations for credit;

(4) provisions for ensuring that examinations given under this section will determine whether or not the student has mastered the essential elements specified in this chapter for the course or courses for which credit will be given;

(5) provisions to ensure that the passing grade for the examination for credit is no lower than required

for the same course or courses for other students in the district; and

(6) provisions to ensure that examinations for credit are properly evaluated before credit is granted.

(b) Credit by examination in the area of other languages, grades nine-12, shall be given in accordance with the following requirements:

(1) The commissioner of education shall approve tests and procedures for administration to be used to measure student proficiency in the skills of speaking, listening, reading, and writing for selected other languages.

(2) The commissioner of education shall establish minimum scores which must be attained in order for a student to earn units of credit in the language being tested.

(3) The cost of student testing shall be the responsibility of the school district.

(4) Regional education service centers may administer the tests.

(c) Successful attainment of minimum requirements on such examinations shall be recorded for credit on the student's academic achievement record.

(d) For courses offered for local credit only, credit may be given by examination at the discretion of the district.

§75.167 *High School Credit for College Courses.*

(a) A school district board of trustees may adopt a policy that allows students enrolled in grades nine-12 to be awarded credit toward high school graduation for completing college-level courses. Such courses shall be provided only by institutions of higher education that are accredited by the Southern Association of Colleges and Schools.

(b) To be eligible to enroll and be awarded credit toward state graduation requirements, a student must have approval of the high school principal or other school official designated by the district. The course for which credit is awarded shall provide advanced academic instruction beyond or in greater depth than the essential elements in Subchapter D of this chapter (relating to Essential Elements—Grades Nine-12).

§75.168 *Summer School Programs.*

(a) School district boards of trustees may establish summer school programs. A board, electing to provide summer school, shall adopt policies to govern the operation of the program.

(1) Students may be awarded credit for courses begun and successfully completed during the summer session.

(A) The program shall meet the same standards as those in effect during the regular school year.

(B) The program shall be administered by a specifically assigned staff member with an appropriate administrative endorsement. The district shall ensure that the administrator has the authority and time during the regular school year to plan and organize the summer program.

(C) Libraries and other necessary instructional resources shall be available on the same basis as during the regular term.

(D) Courses offered shall include all essential elements specified in this chapter for the course, and student progress shall be evaluated according to the same achievement standards as used during the regular term.

(E) One unit of credit must be scheduled for no less than 160 clock hours net instructional time. One-half unit of credit must be scheduled for no less than 80 clock hours. Net instructional time does not include time used for registration, holidays, and daily class breaks.

(F) No teacher shall be assigned more than six hours of classroom teaching per day.

(2) Students may be provided an opportunity to complete subjects or courses begun but not successfully completed during the regular school term.

(A) The district shall ensure that courses offered under this section include all essential elements specified in this chapter for the courses. Essential elements which were satisfactorily mastered by students during the regular term need not be repeated in the summer session.

(B) Student progress shall be evaluated according to the same achievement standards as those used during the regular term.

(b) Credit earned by students in summer school programs in accredited school districts shall be transferable and must be accepted by any other school district in the state.

§75.169 *Award of Credit, Grades Nine-12.*

(a) The award of credit for a course by a school district affirms that a student has satisfactorily met all state and local requirements. Courses for which credit is awarded shall be provided in accordance with this subsection.

(1) Courses offered for a unit of credit in grades nine-12 shall be scheduled for a minimum of 160 clock hours of class instruction. A unit of credit is the equivalent of the study of a subject that is scheduled for a minimum of 160 clock hours, which traditionally is one 55-minute period per day for the 175-day school year. A one-half unit of credit is 80 clock hours. This definition is based on the usual operation of schools. Deviations from the usual operations are acceptable for meeting the unit of credit so long as the school makes available the amount of time required to permit the individual to meet the acceptable achievement standards for the course.

(2) Each school district shall establish a system of reporting grades and credit earned. To determine whether credit shall be awarded, school districts shall use a numerical scale of 0-100. A grade of 70 shall be minimum for a student to pass a course and be awarded credit.

(3) Districts shall develop policies regarding the awarding of credit to students who are suspended from class either on or off campus. Students who are assigned to an on-campus suspension program shall be instructed in the essential elements of the courses in which they were enrolled at the time of suspension.

(4) Districts shall develop policies for awarding credit to students who are not enrolled for a complete grading period. Policies shall ensure that the student is treated fairly in terms of meeting the intent of this subsection.

(5) Credit earned toward state graduation requirements by students in accredited school districts shall be transferable and must be accepted by any other school district in the state. Credit for courses offered for local credit only may be transferred only with the consent of the receiving school district. Districts shall ensure that transfer students are evaluated and placed in classes promptly. Districts shall not prohibit new students from attending school pending receipt of transcripts or records from the district the student previously attended.

(b) In order to be awarded credit for a course, a student shall satisfy the provisions that follow:

(1) A course may be considered completed and credit awarded under either of the following conditions:

(A) the student has been enrolled in a course scheduled for the minimum clock hours and has achieved a grade of 70 or better for the course; or

(B) the student has demonstrated achievement by meeting the standard requirements of the course, regardless of the time the student has been enrolled in the course.

(2) A student shall take at least two and one-half units of credit each semester enrolled in grades nine-12.

§75.170 *School District Policy on Promotion, Retention, Remediation, and Placement.*

(a) Each school district board of trustees shall establish policies on promotion, retention, remediation, and placement of students. Each board of trustees shall be charged with the responsibility of providing a policy ensuring mastery of the essential elements of each course of study. In addition, each board shall establish an acceptable procedure to reteach non-mastering students. These policies shall be enacted with the beginning of school year 1985-86.

(b) Decisions regarding the promotion or retention of students shall be based upon specified criteria that include demonstrated mastery of the essential elements. Districts are encouraged to set levels of mastery that ensure that students are challenged to perform at a level commensurate with their ability.

(c) Procedures shall be designated for the placement of students into the appropriate grade level or course based upon mastery of prerequisite essential elements. A plan for remediation of those students who are deficient in any areas shall also be addressed in the policies.

(d) In order to be accredited, each school district must demonstrate that, in addition to providing instruction in the essential elements, evidence of mastery of essential elements is an integral part of school district policy on promotion, retention, remediation, and placement of students.

§75.171 *School District Hardship.*

A school district may apply to the commissioner of education for special dispensation because of extreme hardship with the implementation of any of the provisions of this chapter. All special dispensations granted by the commissioner of education shall be reported to the State Board of Education at the next regular meeting for consideration of approval.

COMPLIANCE STATEMENT

TITLE VI, CIVIL RIGHTS ACT OF 1964; THE MODIFIED COURT ORDER, CIVIL ACTION 5281, FEDERAL DISTRICT COURT, EASTERN DISTRICT OF TEXAS, TYLER DIVISION

Reviews of local education agencies pertaining to compliance with Title VI Civil Rights Act of 1964 and with specific requirements of the Modified Court Order, Civil Action No. 5281, Federal District Court, Eastern District of Texas, Tyler Division are conducted periodically by staff representatives of the Texas Education Agency. These reviews cover at least the following policies and practices:

(1) acceptance policies on student transfers from other school districts;

(2) operation of school bus routes or runs on a non-segregated basis;

(3) nondiscrimination in extracurricular activities and the use of school facilities;

(4) nondiscriminatory practices in the hiring, assigning, promoting, paying, demoting, reassigning, or dismissing of faculty and staff members who work with children;

(5) enrollment and assignment of students without discrimination on the basis of race, color, or national origin;

(6) nondiscriminatory practices relating to the use of a student's first language; and

(7) evidence of published procedures for hearing complaints and grievances.

In addition to conducting reviews, the Texas Education Agency staff representatives check complaints of discrimination made by a citizen or citizens residing in a school district where it is alleged discriminatory practices have occurred or are occurring.

Where a violation of Title VI of the Civil Rights Act is found, the findings are reported to the Office for Civil Rights, Department of Health, Education and Welfare.

If there is a direct violation of the Court Order in Civil Action No. 5281 that cannot be cleared through negotiation, the sanctions required by the Court Order are applied.

TITLE VII, CIVIL RIGHTS ACT OF 1964; EXECUTIVE ORDERS 11246 AND 11375; TITLE IX, 1973 EDUCATION AMENDMENTS; REHABILITATION ACT OF 1973 AS AMENDED; 1974 AMENDMENTS TO THE WAGE-HOUR LAW EXPANDING THE AGE DISCRIMINATION IN EMPLOYMENT ACT OF 1967; AND VIETNAM ERA VETERANS READJUSTMENT ASSISTANCE ACT OF 1972 AS AMENDED IN 1974.

It is the policy of the Texas Education Agency to comply fully with the nondiscrimination provisions of all federal and state laws and regulations by assuring that no person shall be excluded from consideration for recruitment, selection, appointment, training, promotion, retention, or any other personnel action, or be denied any benefits or participation in any programs or activities which it operates on the grounds of race, religion, color, national origin, sex, handicap, age, or veteran status (except where age, sex, or handicap constitute a bona fide occupational qualification necessary to proper and efficient administration). The Texas Education Agency makes positive efforts to employ and advance in employment all protected groups.

TEXAS EDUCATION AGENCY
AUSTIN, TEXAS
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